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THE SPHERE, SEPTEMBER 5, 1942
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THE SPHERE

Vol. CLXX No. 2224 WITH WHICH IS INCORPORATED THE GRAPHIC SEPTEMBER 5 1942

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Drawing by J. Gilroy

My Goodness — My GUINNESS

G.E.1073.A

Volume CLXX No. 2224 The SPHERE, London, September 5, 1942

THE SPHERE
With which is incorporated "THE GRAPHIC"
The Empire's Illustrated Weekly

THE DAMAGE INFLICTED BY THE R.A.F. AT MAINZ DURING THE HEAVY BOMBING RAIDS OF AUGUST 11 AND 12: An Air Ministry daylight photograph which reveals the extent of the devastation in the now dead city, where 135 acres were completely ruined

Besides its importance as a commercial city, railway centre and river port, Mainz is a garrison town, with many permanent barracks and military depôts. Several of these suffered severely during the two heavy raids carried out by the R.A.F. on the nights of August 11 and 12. Daylight photographs now in the possession of the Air Ministry indicate the extent of the devastation. In addition to an area of total destruction, estimated at 135 acres, in the town itself, heavy damage was also inflicted in all parts of the city and its suburbs. Industrial and factory damage includes: an important chemical factory hit by a heavy bomb; a large cement works hit; silos in the main goods station yard burnt out; sheds in the Amoneburg shipbuilding yards gutted; goods sheds at the South Railway Station demolished; and warehouses destroyed. Three barracks were gutted. In the Kastel district, six barrack buildings in the Ordnance Depôt were destroyed, and two others were either burnt out or seriously damaged. The impressive picture reproduced here shows only a small part of the damage in the very heart of Mainz. Note the lattice-like effect caused by the sun shining through the open roofs and gaping window embrasures. The white scarred patches are just rubble and dust where heavy blast bombs have brought the buildings down. Note also the absence of traffic: most of the streets are impassable, and the city centre is quite dead

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A WAR NEWSLETTER—No. 157

1, NEW OXFORD STREET, W.C.1.

Duke of Kent.—The nation, in all sincerity, shares in the grief which has befallen the Duchess of Kent, Queen Mary and the Royal family by the death, on war duty, of the Duke of Kent. This was a young man of great charm and promise, and, already, of fulfilment. There was, indeed, a singular charm about this handsome couple which had endeared them to the public, for their happy family life, their gaiety and good taste, their sensible modernity, their initiative and sympathy and wide interests. The fourth son of King George V, he was born in December 1902, and was in his fortieth year. He married Princess Marina of Greece in 1934, and leaves a family of attractive young children, whose happy family life was of special interest and pleasure to the nation. I had occasion once to stress the difference in the scope and weight of public duty deemed fit for the younger Princes, sons of King George V, and of that demanded of the sons of King Edward VII. In the manifold public duties demanded of the younger generation, the Duke of Kent from the first bore his full weight. Having a greater share of artistic taste than his brothers, he chose as one of his chief fields music and painting and allied arts. His wartime activities are fresh in memory, and he multiplied and pursued them with no thought of personal comfort or safety. He was at home in an aeroplane—he had learned to pilot a machine in 1930—and used it as his normal means of long-distance transport. Only last summer he flew in a Liberator to Canada to visit the Empire Air Training Schools. His career in his youth was interrupted and directed by bad health, which demanded his retirement from the Navy, and in 1929 he served in the Western Department of the Foreign Office. He was the companion of the Prince of Wales on some of his tours on the Continent of America, and paid visits to South Africa and Canada. In the years before the present war, he was a frequent visitor to France and the Balkan and Mediterranean States, and was very much a citizen of the world. The Royal Family and the country have lost a prince of great charm and promise, and an ever-growing sense of responsibility and duty. There was clear scope for his qualities and energy in the years ahead. His untimely death would once—not long ago—have inevitably evoked in the Press the tag:

Mors æquo pulsat pede
Pauperum tabernas regumque turres.

How far this war has divorced us from such clichés! Equality of sacrifice from top to bottom is taken for granted.

A Premier's Holiday.—"Bronzed and well," Mr. Churchill returned on August 24 from a three-weeks holiday. The Government (*quorum pars major est*) put a magic carpet at his disposal, complete with bed and breakfast, and urged him to choose any place in the sun not poisoned with Nazi fumes. He had recently explored those United States and he plumped for the Pyramids and the Kremlin (both worth seeing), and Teheran, and some battlefields old and new. (And other sights not yet released.) He drove the carpet 15,000 miles (say, 400,000 gallons), and met some interesting people, Shahs, Pashas, Premiers and Ministers, none more interesting than M. Stalin of Russia, a very eminent man. He dined out a good deal and talked of many things, and really got something of a well-deserved and much-needed change of air. *Some* holiday, *some* tourist. Some say it was a busman's holiday, nothing more. If you 'll tell me where in this war you can get a holiday from the odour of war, I will refund postage. But how many men approaching three-score-and-ten, if offered Mr. Churchill's free trip, would have leapt at it without a qualm and returned "bronzed and well"? *Some* bronze. *Æs triplex.*

OUR NEWEST ALLY—BRAZIL: As the culmination of U-boat banditry against neutral Brazilian shipping, resulting in the loss—in one week—of five ships and the deaths of hundreds of Brazilian men, women and children, Brazil declared on August 22 that she considered herself to be at war with Germany and Italy. In a message to President Vargas, Mr. Roosevelt said: "The action taken to-day by your Government has hastened the coming of the inevitable victory of Freedom over Oppression, of the Christian religion over the forces of evil and darkness." The picture above is a happy portrait of Dr. Getulio Vargas, the President of Brazil, who has guided the destinies of his country for the past twelve years

Easy as ABCA.—The pamphlets of ABCA on war and current affairs are worth the paper they are printed on. I have learned much from them. They are directed towards a high ideal—to make all classes politically-minded, interested in public affairs and capable of reasoning out for themselves the causes of things and the right aims of national movements and efforts. I have referred elsewhere to Mr. A. L. Rouse's trenchant criticism of the working classes in regard to their political consciousness and responsibility. As "a son of the working people," he branded, in his *Cornish Childhood*, their "congealed stupidity, credulity, liability to panic and political foolery." I would not go so far (nor yet so selectively) as Mr. Rouse, but I would go far enough to assert that ABCA pamphlets are invaluable for study by *all* classes. Of these fortnightly pamphlets none struck me as more clear or more useful than the issue of July 4, which contained Mr. Nicolson's *Why We Are at War*, and the phases of progress and failure between wars, clearly set forth by an anonymous historian. Mr. Rouse's (incidental) loathing for Lord Baldwin and Mr. Chamberlain, and all which they stood for, would not prevent him probably agreeing with Mr. Nicolson's main argument: we are at war because, having tried by every means (even humiliating and reckless) in our power to avoid it, war was forced on us by Hitler's insane ambition. Nothing but Hitler's death could have avoided it (and, *pace* Vansittart, not even that happy event).

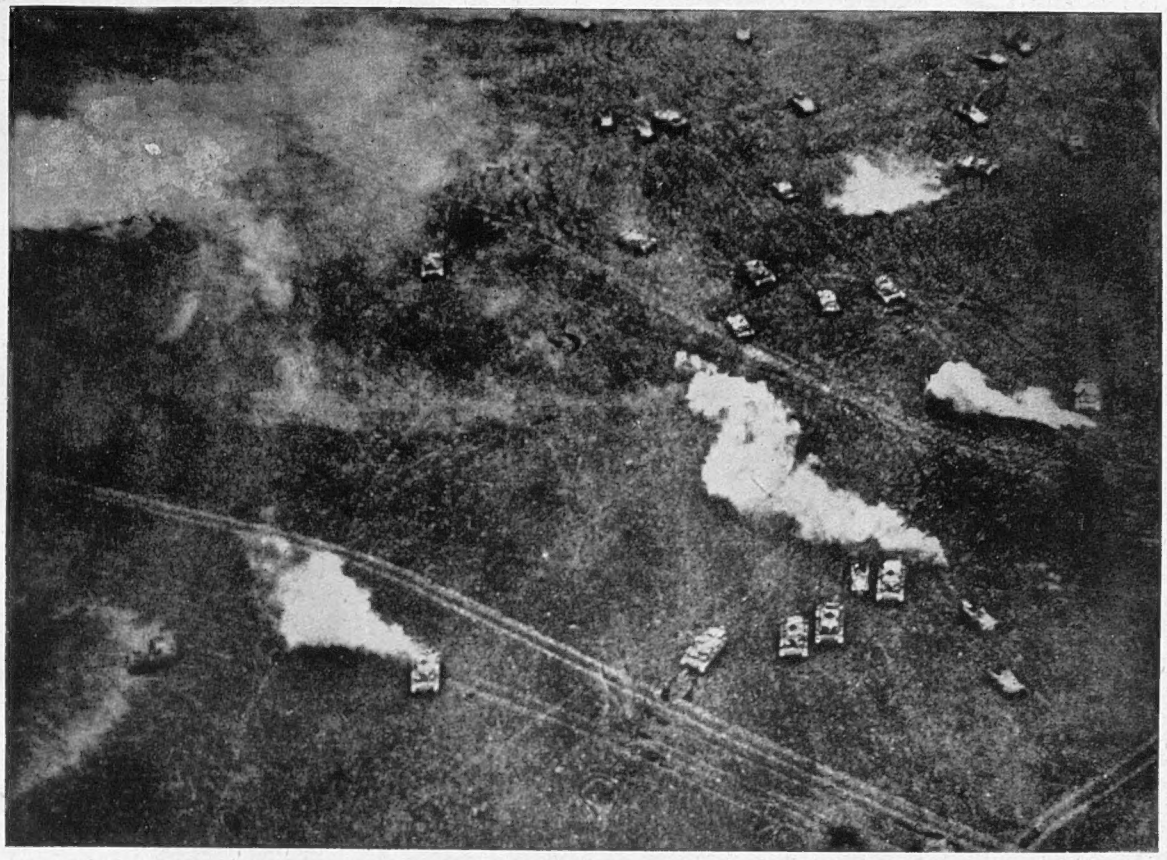
But Controversial Still.—You may say: "This is trite; everybody knows it." But in fact it is still a controversial theory, and indeed the no man's land, which divides a man like Nicolson from a man like Vansittart in their attitude to the German race, is wider than the Atlantic and as stormy. Is it Hitler's war, or the Nazis' war or the German people's war? If the whole nation were agreed on that, official propaganda could be simplified and comprehended. If you read Pamphlet 21's two articles in reverse order, you may clear your mind. I never agree with Vansittart (chief adviser of kings and statesmen in those years between!) and often quarrel with Nicolson's writings; but I am convinced again (by Pamphlet 21) that this is Hitler's war and that it must not be Hitler's peace, which, but for Britain's lone stand, it would to-day be. That is a clearing of the mind. But, oh! how rash it is for any historian to turn from the events leading up to war and war events, to sketch in "the shape of things to come." That Arcady of freedom combined with security, and with the means of "greater personal opportunity," has somehow (to be ideal) to become a world free from the taint of "capitalism," of preoccupation with personal and material possessions; and just now that ideal seems to me as difficult of attainment as the safeguarding of freedom and the winning of security. In war it may be attainable. While the bombs fall, and human life is cheap and short, one's purse is trash. But when the joy-bells ring again, that "greater personal opportunity" goes back on the gold standard. Better concentrate on Hitler's war.

£15,000 a Year and a Palace.—The moderation of the Primate's reply to the Radio Parson's inquisition concerning bishops with large incomes living in palaces and the Church drawing some of its revenue from slum rents, struck me as moderation carried almost to excess. Perhaps it was a rhetorical question, that about the Primate's £15,000 a year. I doubt if anybody capable of reading print believes to-day that a Primate has "money to burn." The question remains: Why the Palace? Lambeth would make a splendid modern flat tenement or blocks of tenements. So would Hartlebury, Cuddesdon and what not. What larger questions that solution raises! No doubt at all the crux of our uneasy and uneconomical progress to rationalisation and realism in the last years of peace and in this war lies in the fact that we live with a foot in two worlds and we are not quite sure yet if one of them is dead as Queen Anne. Are we yet truly democratic? Are we yet prepared to scrap traditions, once our pride and glory, to make us so? Wherever you go, whatever you read, you observe clear signs that no such certainty exists, that no majority "aye" has ever been registered. Yet before a new order can evolve from this war that question must be faced and decided. Who so bold and certain as to declare that a majority voice of the British public in this year of fate is ready to declare for the scrapping of expensive forms and fine or grand traditions, of colour and of dignity and pageantry, in every field of national life, and for the substitution of a cheap, mass-produced machine—a Utility Ford for a Rolls-Royce? The people most to benefit from the substitution are those who to-day are the targets for the criticism and must keep the Rolls in some sort of polish with "worn-out tools."

Max—Time's Revenges.—Max Beerbohm has been entertained. On his seventieth birthday the intelligentsia's entertainer was entertained, through the initiative of seven men, with seventy more co-opted. Many of us outsiders, if not jealous of the seven, at least would silently have claimed to be included in the seventy. We yield to none in the zeal of our expressed admiration for Max, as artist of pen and pencil, over half a century. How shall I word it? This artist wrote and drew for *me*, his younger self for my younger self, his older self for my older self. Who are these seventy, let alone these seven? It should have been *my* party. I was frozen out, the Max-fan No. 1, who lacked initiative, *push*. I have no petrol and I stayed at home. And now, of course, my worship is turned to gall and vinegar. Another good fan gone wrong. Hear Max's younger self: "Knighthood is a cheap commodity these days. Though all sneer at it, there are few whose hands would not gladly grasp the dingy patent. . . . The Provincial Mayor delights to think that . . . his wife will be as good, colloquially as a marchioness." "It is quite likely that, in the next century, forms of application for knighthood will be sent out annually to every householder and be thrown with other circulars into the wastepaper basket. . . . Knighthood may be one of the lighter forms of punishment of the Law." "Forty shillings or a knighthood" sounds quite possible. At present, there is no class more covetous of knighthood than that new class of writers which has come in on the wave of popular education. . . ." (Published 1907). Did Sir Max's younger self meet his older self as he returned along the golden drugget, wearing brand-new gilt spurs? And what was said, or looked, at that historic meeting? We shall never know. These things are not for public view. I know this (though I was not asked to the party): If Sir Max had been always consistent, if his younger self had never passed his older self with tongue in cheek and a little sting on the end of his tongue, he had not been the hero of my youth and the resource of my senility. Long live Sir Max!

THE OLD STAGER

SCENES from the HEAVY FIGHTING in RUSSIA



A TANK BATTLE ON THE RUSSIAN PLAINS: A dramatic picture of a Soviet counter-attack as seen from the air. The terrain is criss-crossed with tank tracks, and over all is the smoke and glare of battle

GENERAL OF THE SOVIET ARMY, G. K. ZHUKOV, who has been appointed Vice-People's Commissar for Defence, and thus becomes Stalin's right-hand man. He is the son of a peasant and last year he defended Moscow against the Germans

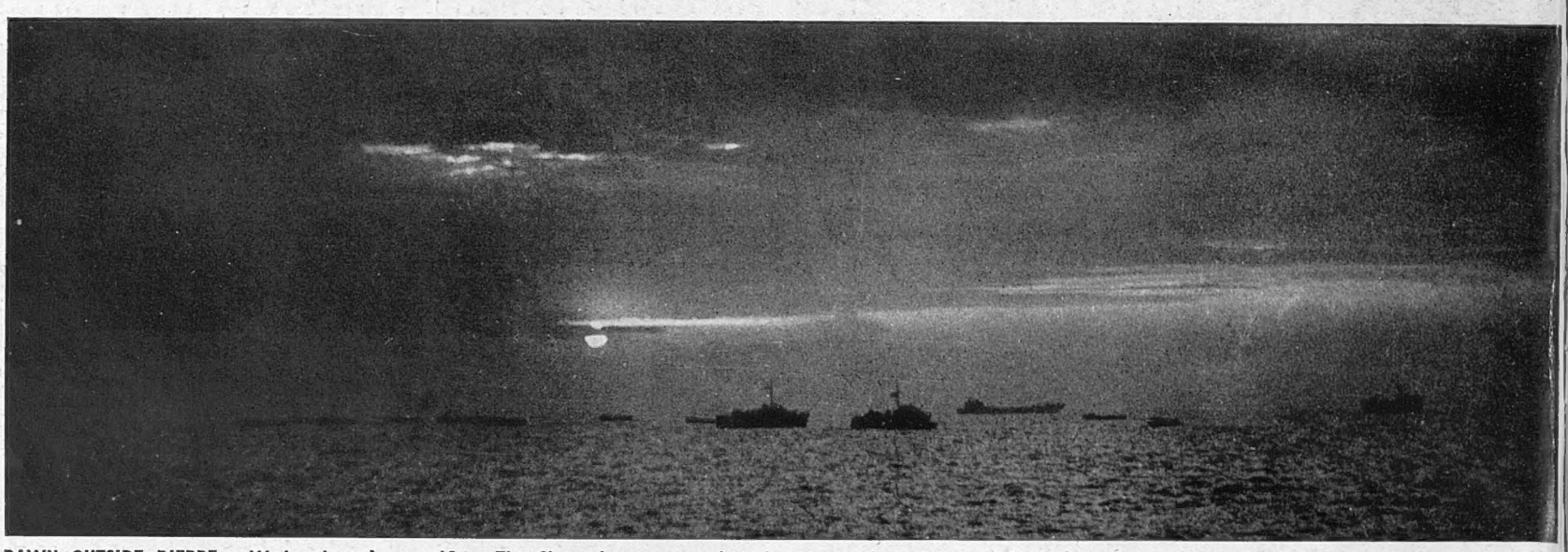
THE FAMOUS DON COSSACKS, who have once again been fighting for their native lands

HOW THE RUSSIAN INFANTRY ADVANCE INTO BATTLE: Supported by tanks in the van, the foot soldiers come up behind the big fighting vehicles. This is a method which has also been followed by the British and Axis Armies in Egypt

AFTER THE HEAT AND FURY OF BATTLE IN THE DON REGION: According to the Germans, this is "all that was left of a Soviet Army which, unable to reach the safety of the east bank of the river, was annihilated" on the Don. The most savage fighting of the whole war has been experienced in this region, where every foot of the way towards Stalingrad was contested by the Soviet troops with the utmost fierceness

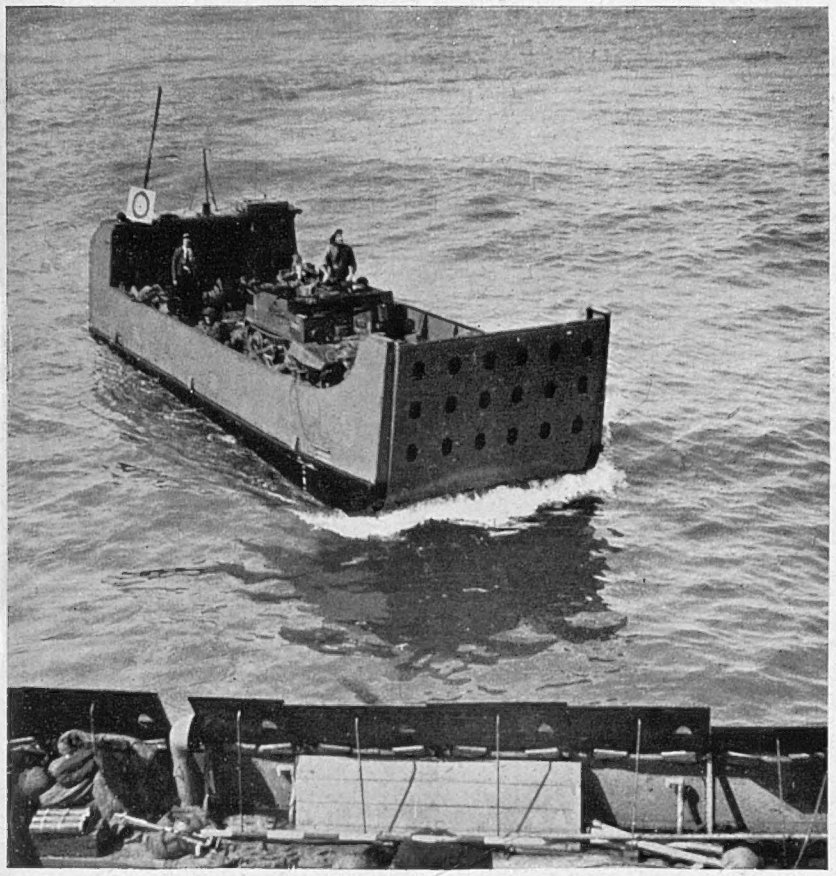
FURTHER PICTURES of the GREAT RAID on DIEPPE

(See also pp. 298-301 of this Issue)



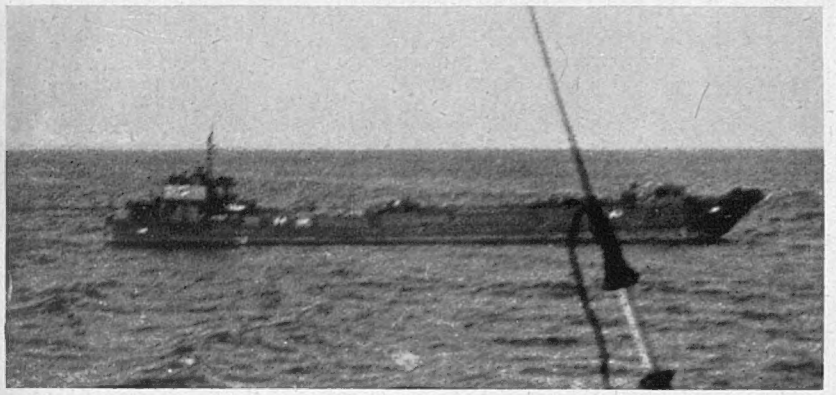
DAWN OUTSIDE DIEPPE: Wednesday, August 19. The Channel was crossed under cover of darkness, and the principal attack was launched at dawn. The naval vessels engaged were protected by a strong air "umbrella," which covered the landings and allowed the withdrawal to take place as planned. A feature of the whole raid was the absence of enemy surface craft to contest our naval command of the Channel

THE SCENE OFF THE BEACHES OF DIEPPE as naval motor-launches awaited the re-embarkation of the Commandos. It was in these special craft that the troops were landed: despite dive-bombing by German aircraft (during the course of which a number were shot down), the naval vessels remained at their stations inshore until their proper complements had been safely re-embarked

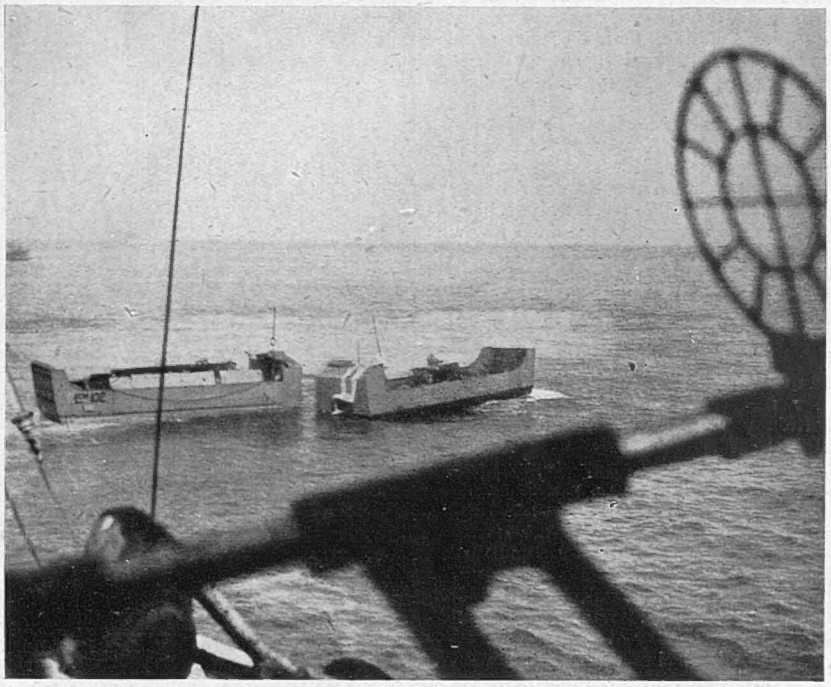


HOW THE ARMOURED FIGHTING VEHICLES WERE TAKEN ACROSS : A special landing barge bringing back its small tank and crew after the re-embarkation. The front of this barge drops down to permit the vehicle to drive ashore

A BRITISH DESTROYER RESCUING SOLDIERS from a landing craft which was sunk during the operations : a picture which demonstrates the very close support given by the Navy to the Commandos throughout

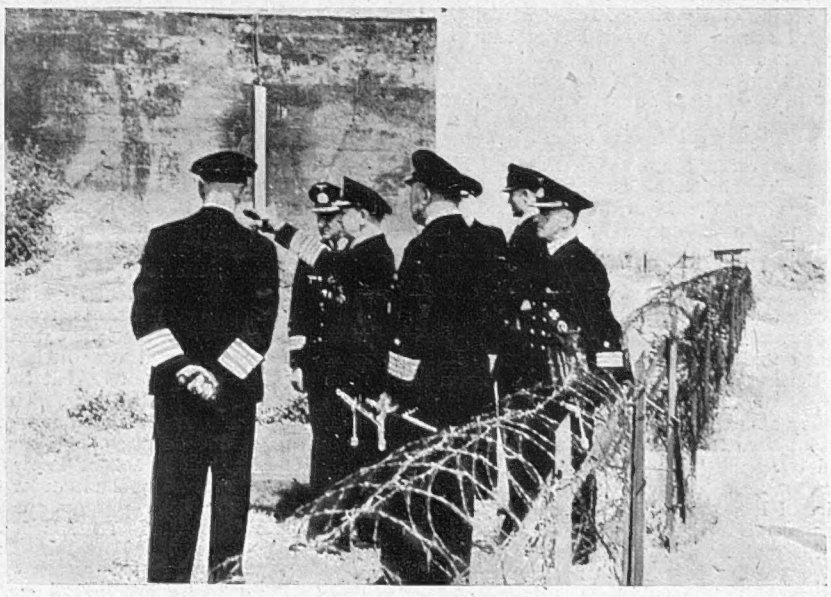


A NEW TYPE OF LANDING CRAFT in which troops and equipment were ferried across the Channel. Note the length of this vessel and its complete little bridge aft. Tanks were carried over in boats like these



TWO OF THE SPECIAL LANDING CRAFT which took part in the operations lying off the shore at Dieppe, under the protection of the Royal Navy. The vessel on the left has its steel protective shields raised

A RESULT OF THE DIEPPE RAID—the Germans now have "invasion" jitters : This is one of the many pictures now being disseminated throughout Germany by the Propaganda Ministry to bolster confidence in their Channel defences along the Occupied coast. The German Home Front has suffered from a bad attack of nerves following on the Raid. This picture shows a "watch tower" which is stated to be part of the second "West Wall" along the Channel



ANOTHER PICTURE FROM GERMANY to restore Home Front confidence : Grand Admiral Raeder, with members of his staff, inspecting a coastal-defence building on the Channel coast

THE BATTLE OF THE SHIRTS IN FRANCE

What Jacques Doriot, Most Ardent Turncoat and "Collaborationist" of Them All, Will Do If and When He Achieves Power. The Career of This Extraordinary Quisling and His Adventures in Russia and Germany are Here Traced in Detail

By FERDINAND TUOHY

OFFICIAL Washington enjoys special "pipelines" of information from both zones in France, and it will not be surprised if Laval shoots his bolt very soon and is succeeded by Jacques Doriot, as a result of a *coup d'état* provoked and sponsored by the Germans.

To listen to him, Laval has gone the whole Nazi hog. He has irretrievably declared his desire for a German victory. He has publicly coerced Frenchmen to supply Hitler's most urgent need by going to work in the Reich. He lays every ill he can at Britain's door. But the Germans have more than begun to suspect that Laval's words are in the nature of a façade, something much less tangible than a smoke-screen, but behind which the sly peasant aspires at the least to the Allies finishing level with their enemies. They suspect Laval knew he could never get the French workers for Hitler (42,000 have gone in three months, but 30,000 Frenchmen have left Germany in a like period, so that Hitler has gained by 12,000 French for his war industry), and that his keenness on a Germany victory was merely a blind designed to keep Hitler from looking too closely at the various republican forms which Laval has quietly reintroduced in hope of lessening French disgust with him. To credit Washington, Nazi thumbs are being turned down to Laval because he is not giving results, but rather signs of an extremely astute *attentisme*.

The expectation, then, is that a Single-State Party, Nazi model, will presently emerge from the miserable Vichy-Paris mess, and that its most likely *chef* will be Jacques Doriot, in preference to the diminutive lawyer-journalist, Marcel Déat; the journalist impure and simple, Jean Luchaire; and Pierre Laval himself. Intrigue and jockeying by these three arch-quislings are at present being closely watched, when not manipulated by Otto Abetz, who has a *raison de scandale* for favouring Luchaire. But for several reasons Doriot is in the strongest position for *coup d'état* work. He hasn't yet been tried. He is a vital, pugnacious fellow of lungs and presence. He can claim to be of the people. He is a good spell-binder. His device "P.P.F." ("*Parti Populaire Française*") has for years stared from the walls of France, where its tough youth is thoroughly dug in. And ever since 1938 he has been Hitler's No. 1 reserve for what would be the chieftaincy of the *Marche de l'Ouest* under the *Herrenvolk*.

Doriot is the former Communist Mayor of St. Denis, Paris working-class suburb. Such a career as his has been can hardly be concluded in a country like France other than by bomb or bullet. The things men do for power when they might be cultivating their gardens! In the merry '20's Doriot was French Secretary of the Communist Internationale, a broth of a boy with curly black hair and pounding fist. We correspondents of American papers had him on our list as one of the show-pieces for visiting lovelies. A French Bolshie, all alive and kicking and ready for a drink on the zinc after the bawling. Paris lost a *numéro* when Doriot had to seek sanctuary in Moscow in the early 1930's. There he saw the light, and it wasn't red, but whatever colour industrialists and bankers shine at one another. Doriot returned to Paris, and set about doing what Hitler had just brought off through Von Papen. He offered to save French bankers and industrialists from Bolshevism, the inner mechanism of which he had good reason to know, in return for their setting him up as chief of a new "realist" party—the P.P.F.

After a while, however, *ces messieurs*—to-day's most important "Collaborationists," lest this one day be conveniently forgotten—decided that their servitor wasn't making sufficient headway, so Doriot turned to Berlin for funds, the ever-open Berlin hand from which the Belgian Fascist, Degrelle, was taking money about the same time. Since the capitulation, Doriot has bellowed from Paris in his own newspaper and over the wireless, utter collaboration with his Nazi master, of course. Doriot wears the black shirt of Fascism, which he fleetingly put off to don German uniform in Russia, where he was figurehead of the small French anti-Bolshevik unit. The principal value to Doriot of this performance was that it brought him Pétain's benediction, which each contemporary French scoundrel requires for his advancement while impatiently waiting for this deadening old trout to shuffle off. The Marshal continues to pull weight with the *bien-pensants* and even with a lot of others still clutching at an aura gone with the wind.

Under the title "Realities," Doriot recently published his intentions as proclaimed from a thousand recruiting platforms round France. If recruits have not been plentiful, Doriot might none the less succeed in inflicting himself as the government in existing conditions, and he hints as much. "Of course, we are looked upon as traitors sold to Hitler," but he knows how to deal with that. "It suffices to express one's propaganda convincingly and to keep repeating it. Bear in mind the incomprehension and bewilderment of the French mass. Political argument advances but slowly in men's heads; the rhythm of their brains is backward compared with the *élite*. If we promise the people to lighten their material burdens, they will carry us to the highest responsibility."

Having thus borrowed from *Mein Kampf* and Goebbels, Doriot's policy in power is no less simplified; the reverse of that followed by the Third Republic, particularly in foreign affairs. Past French Governments treated Mussolini with an inconceivable insolence, while their attitude towards Franco showed very little diplomacy. "Happily, Spaniards do not hold it too much against us, but have been good sports. They might have profited by our defeat to demand many things, but they have not done so." (It is perhaps necessary to mention that Doriot knows this is all tosh. He sells it to the public in order to get into the position to help Hitler put over a Nazified Europe, well knowing that Hitler's other chief *gauleiters*, Mussolini and Franco, would demand and receive much at France's expense.)

As for Britain and the United States, they are the French people's hereditary enemies, and France has naught in common with either. "Everything French is hostile to the Gaulle-Churchill-Roosevelt clique; one needs but the memory of Rouen's market-place, of the rock of St. Helena, of the fortress of Fashoda." But France needn't bother about England, as the people there cannot hold out under German aerial hell. And the war will be over before America can really intervene. Moreover, France has attached too much importance to "this country of niggers, Jews, Irish and Germans who love Germany. These go to form a splendid museum collection, but not a people capable of snatching victory."

With Russia, things looked to be equally simple. After proclaiming, amid Hitler's stunning early victories in July 1941, that Russia had vanished from the world map, Doriot thought conditions safe enough to launch his anti-Bolshevik Legion, with a view to what he thought would be just a propaganda promenade to the Eastern Front. But Moscow held, and very soon Doriot deemed Paris was better than the Russian winter. Regardless of his previous prognostications, Doriot now told his followers that Stalin's Russia was a most formidable arsenal in the hands of a savage. France's role was accordingly clear: Frenchmen must fight beside the Germans. "The occupation may be disagreeable, but the Germans are the real allies of France, towards which they have shown an unheard-of generosity. The conqueror offers collaboration. Before peace is signed, he returns our prisoners and gives us the means to work and breathe, not to die of asphyxia." And Alsace-Lorraine is to have special status, "an offer which moves one deeply and fills one with hope."

But it isn't enough that Frenchmen should have died in German uniform. And here is Doriot's programme: "We must participate totally, side by side with the adversaries of yesterday, in the war against Bolshevism; we must halt and seize British ships in the Mediterranean; we must retake those parts of our Empire which the ruffian de Gaulle has seized."

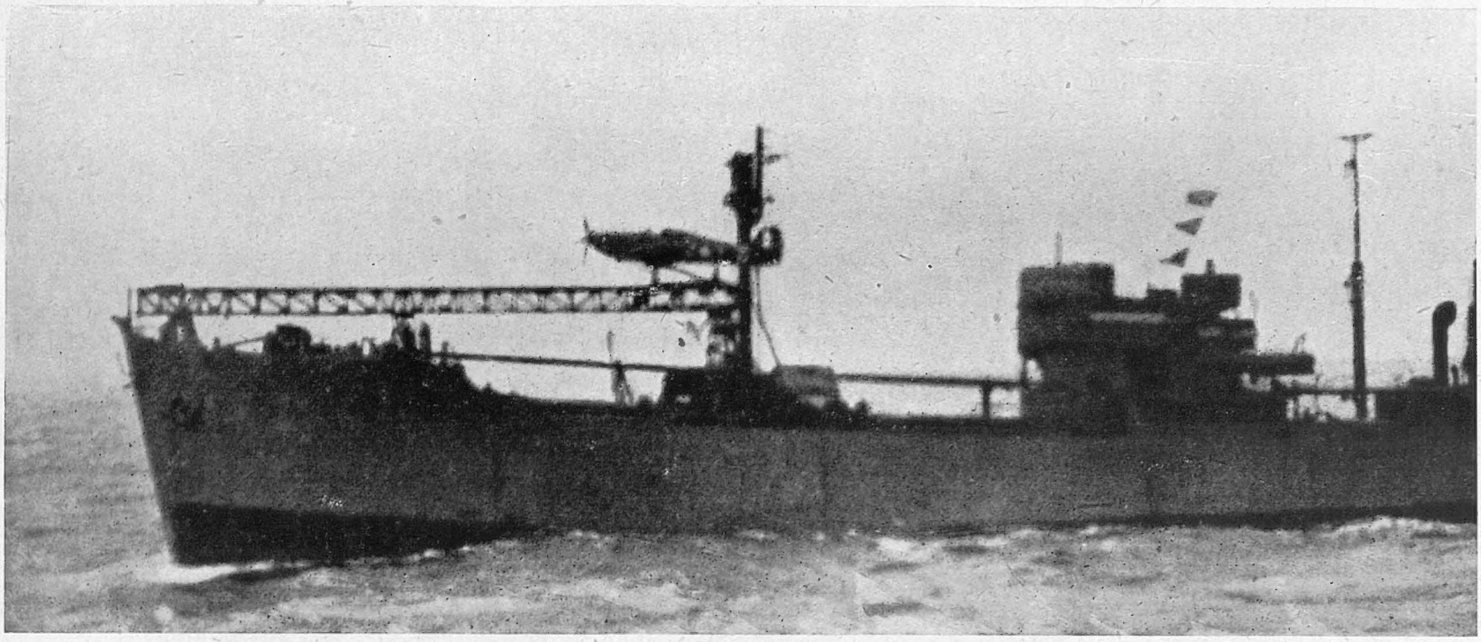
The Fighting French do not underestimate the danger of Doriot. A Doriot Government would rule from Paris, with or without Pétain, who has lived a year longer than his prototype Hindenburg, without going so gaga. Playing up old animosities, it would steer specifically towards war with England, and should things continue to go badly for the Allies, Doriot's Blackshirts would undoubtedly increase in proportion to Hitler's success. Doriot's vigorous and colourful record has long held an appeal for uninitiated calf-youth incapable of seeing that Doriotism spells the end of the *France de mille ans* they inherited with pride and heart-throb. But no use blinking that the longer the war lasts, or the more underlined Hitler's successful waging of it, the more French youths will don black shirts. Doriot's appeal over a length of time to such a youth army constitutes the main French hazard.

French youth is currently being offered a choice of shirts. There is also the blue shirt of Pétain's "Companions of Honour"; the olive affair of Laval's S.O.L. (*Service d'Ordre Legionnaire*); and Dorgères' Peasant Front, which affects a green shirt. This movement might have gone bigger guns but for its aristo-adventurer chief being bogus. For some reason, Déat's *Rassemblement Nationale Populaire* never chose a shirt, and there's little point in its doing so, now that Déat looks like having to slip partially into Doriot's black shirt. Déat is a brilliant theorist who lacks Doriot's robustness. Luchaire's ambition, daughter and all, would probably have to be satiated with a Goebbels job under the new Single Party. In seeing no place in this for Laval, the Americans may well be right, though the element of risk might retain him in the foreground, for if each of these quislings is ceaselessly watched over by a tough bodyguard, it seems improbable that they can all escape indefinitely.

While this quartet of Frenchmen who would bring their glorious country down to the position of a servile satellite wrestle for its "government," it is heartening to remember that the Fighting French have gained notable recruits in MM. Philip and Gouin. It may soon repay to give a sketch of France's hopes in Britain.

JACQUES DORIOT—Future Premier of Vichy France? Former Communist Mayor of St. Denis, a working-class suburb of Paris. Former French Secretary of the Communist Internationale and a French "Bolshie" of the vociferous type. A visitor to Moscow in the early 1930's when France became too unhealthy for him. On his return from Moscow, his Communism was left behind: soon he was planning his new party—the *Parti Populaire Française*—backed up by French bankers and industrialists. When rejected by the latter he turned to Berlin for funds. After the attack on the Soviet in 1941, Doriot went to Russia with his "Anti-Bolshevik Legion." Now he is an out-and-out "Collaborationist" ready to do the bidding of Hitler and Abetz. With his unsavoury record, this ex-Communist, ex-firebrand, ex-social worker is ready to hand over France to the conqueror when Laval has served his turn and gone

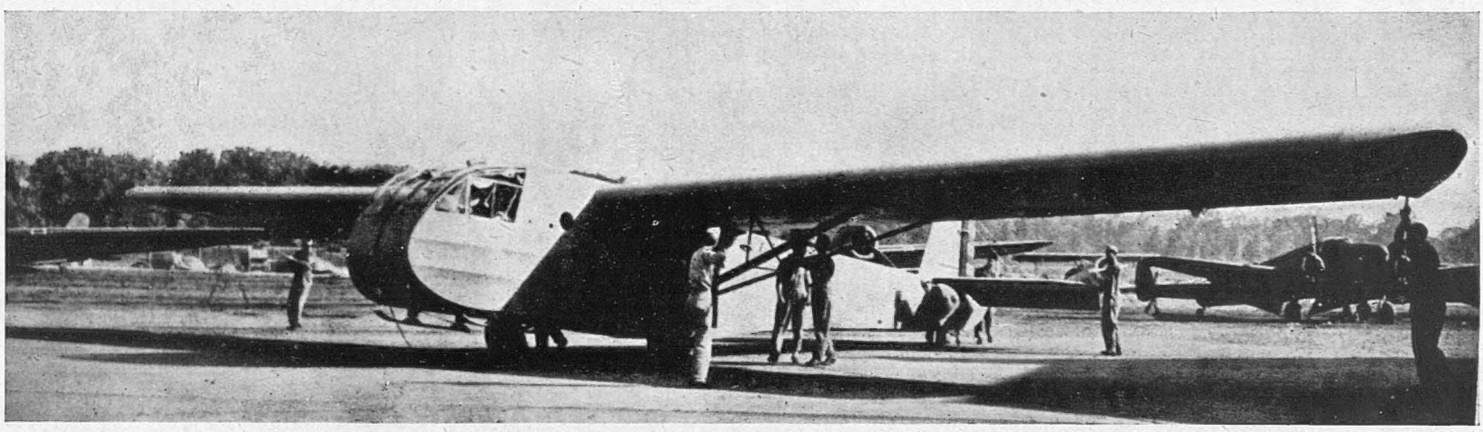
The fact that goods made of raw materials in short supply owing to war conditions are advertised in this publication should not be taken as an indication that they are necessarily available for export



THE "BRAVEST OF THEM ALL"

The First Picture of a British "Catafighter" in Action

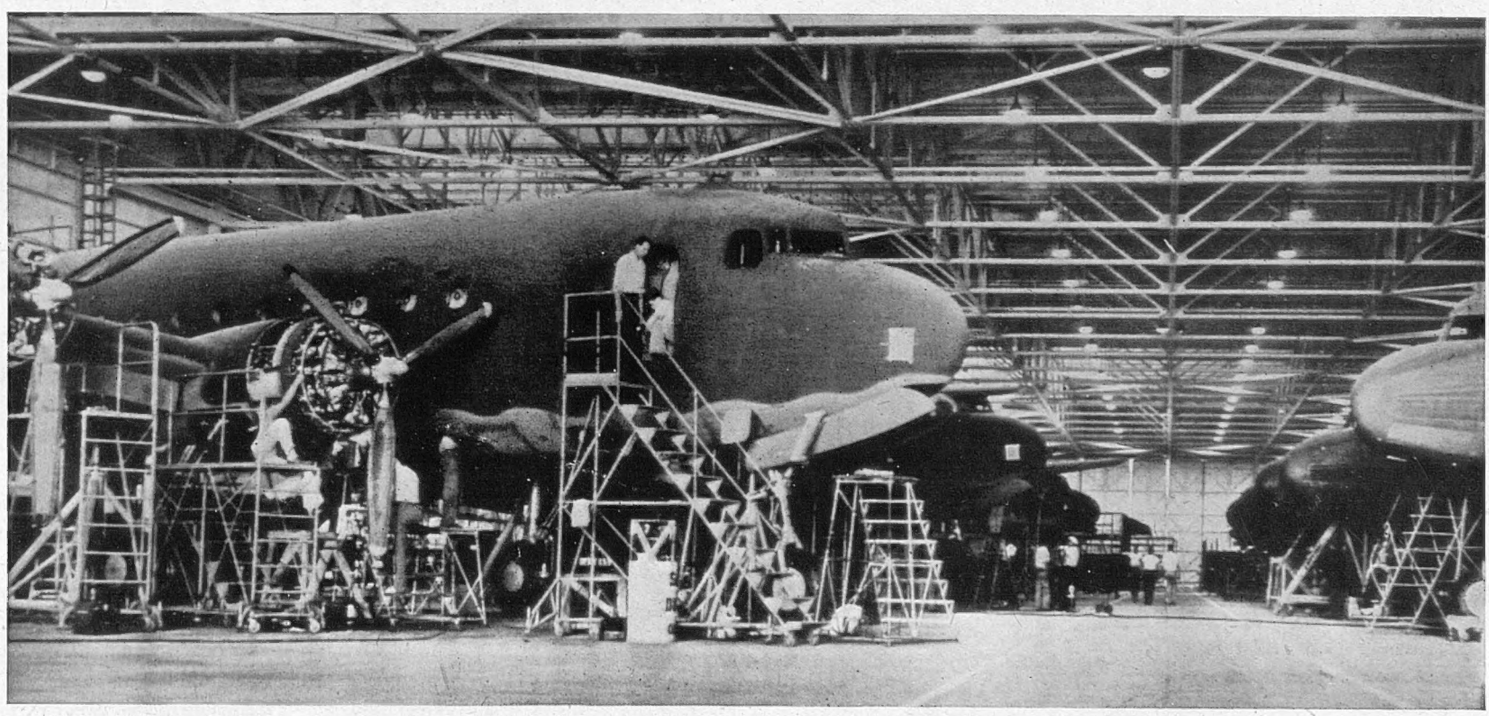
On page 307 of this issue we reproduce a drawing showing a British "Catafighter" (or catapult-launched Hurricane) landing in the sea after a flight over a convoy. These pilots have already made their presence felt in the Battle of the Atlantic; and at the moment of writing not a single ship has been lost from any convoy which has included a catapult-ship within its escort. After having been catapulted into the air, the pilot has to abandon his aircraft in mid-air and come down by parachute: he is picked up by an R.A.F. launch. The aircraft thus becomes a total loss after each flight; but it is undoubtedly worth while. Above, a Hurricane is seen on its catapult waiting to be launched: it will be observed that the plane is headed down-wind, not *into* wind, as is usual. This is because its initial speed is so great that there is no particular virtue in heading in the other direction. In any case, the ship could not very well turn out of its proper place in the convoy



THE AMERICAN TROOP-CARRYING GLIDER

Now in Mass Production in the United States

Now that the Americans are in the war, with a will, it is only to be expected that they should press forward with the production of aircraft of all types. Above is one of the first pictures of the U.S. Army Air Force new glider, for carrying Commando troops wherever they may be needed in the many battle zones in which they are now engaged. The C.G.4A, as it is known, is a huge affair, which is capable of carrying fifteen fully-equipped soldiers. An idea of the glider's tremendous size may be gained by comparing it with the men standing alongside it on the landing-ground



AMERICA STARTS BUILDING CARGO PLANES

A Scene on the Production Lines at the Douglas Works

Mr. Henry J. Kaiser, the great engineer who has already revolutionised shipbuilding in the United States, is now turning his attention to the construction of cargo-carrying aircraft. But first in the field with big transports is the well-known Douglas Aircraft Company, many of whose aircraft are already engaged in the conveyance of men and materials. This picture shows the scene on the production lines at the Douglas factory, where the giant four-motored C54 cargo planes are in process of manufacture. Each of these has a capacity equal to that of a standard railroad truck

THE MAN WHO WORKED FOR PEACE—but died within fourteen months of the War's beginning: Mr. Neville Chamberlain, with his sister-in-law, on the steps of No. 10, Downing Street, at the end of his first year as Prime Minister, May 27, 1938

AT THE OPENING OF THE FOURTH YEAR . . .

A Review of the Chief Events of the Three Difficult Years Which Have Just Passed

By CHARLES GRAVES

THREE years of war! It seems longer since Neville Chamberlain announced, in that sad, tired voice, on the radio that Armageddon had begun; a statement followed almost immediately by the first wail of the sirens. Everyone stared at each other in wild surmise, thinking that Hitler was even quicker off the mark than one could have expected—not realising that it was a false alarm caused by an aircraft bringing a French reporter to London. . . .

For fifteen years I have kept a series of diaries. Here in front of me lies my account of London on September 3, 1939: "Crewe House looking beautiful; new-laid eggs at 1s. 6d. a dozen; notices outside the Ritz about gas helmets for infants under two; Eros still unprotected; a few sand-bags by the Underground Station; the finest Whitstable oysters at 2s. 6d. a dozen; notices of men wanted for stretcher parties; special police in mufti and tin hats; taxis towing fire-fighting appliances behind them; at the corner of Conduit Street and Bond Street 'An important property to be let on a long lease.'"

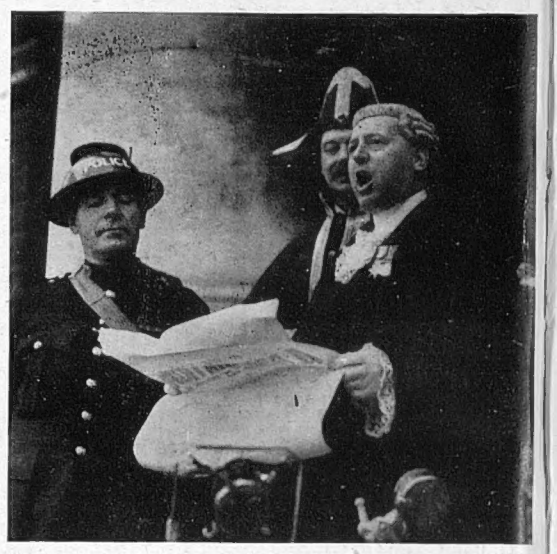
A few days later I recorded a meeting with Captain von Rintelen, who "had dashed back from his villa near Ostend at the first sign of war to offer his services." You know where he is now.

Here is a series of brief items:—The appointment of Lord Gort as Commander-in-Chief; the sinking of the *Athenia*; the closing of cinemas and theatres; the overrunning of Poland; the popularity among civilians (but not among the Regular troops) of "We're going to hang our washing on the Siegfried Line"; the start of petrol rationing; the death of General von Fritsch; the arrival of the B.E.F. in France; the huge jump in Income Tax; the unpopularity of Mr. Joseph Kennedy in describing the situation as a "phoney war"; the decrease in the size of newspapers; the visit of the King to France, where, accompanied by the whole General Staff, he inspected the troops without any molestation from the air. I was present myself, and it still seems to me the most remarkable event of the whole war. What caused Hitler to hold his hand? Knowing, as we do now, the strength of the *Luftwaffe*, it is incredible that he did not send over a cloud of Stukas and Messerschmitts and blast us off the face of the earth. It was, indeed, a phoney war on land and in the air. For months neither the R.A.F. nor the *Luftwaffe* attacked any inland target in each other's territory. It was not until January 1940 that this peculiar state of affairs was ended by a Heinkel opening fire on a number of French peasants working in a field near Villeneuve. Even this turned out to be an isolated case.

Those were the days of the leaflet raids. Many people thought them a waste of time, but all the while they were giving our pilots invaluable experience in flying at night over German territory.

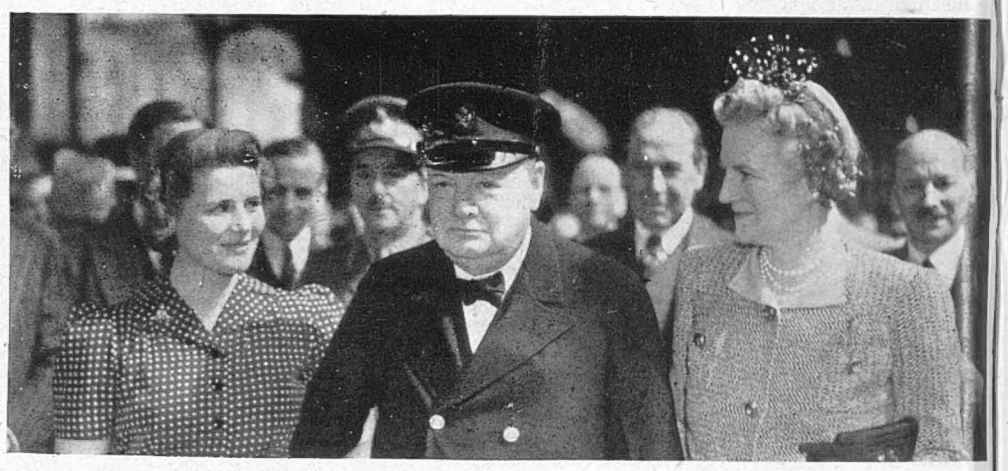
As for the B.E.F., only a brigade was doing any fighting at all—a few miles in front of the Maginot Line in the direction of Metz. Even in those days an infantry colonel told me of his anxiety about the tremendous automatic fire-power shown by the German patrols which came in contact with his own battle patrols. "We need dozens of tommy-guns per company," he said.

The overrunning of Denmark had already occurred. Then came the dangerous attack on Norway, and our belated attempts to save the situation. That was the first time when the Commandos were used, though they were called independent companies, and were armed more for sabotage than for hand-to-hand fighting. At first, things looked quite rosy. . . .



READING THE WAR PROCLAMATION AT THE ROYAL EXCHANGE: Mr. W. T. Boston, Saltbearer and Acting Town Crier of the City of London, on September 4, 1939

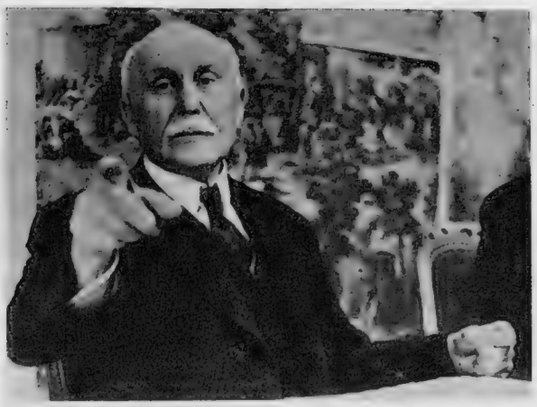
SEPTEMBER 1939: The terror by sea begins with the torpedoing of the "Athenia" off the Irish coast by a German U-boat. How the survivors were brought ashore at Galway



SINCE MAY 1940, when he assumed the Premiership in succession to Neville Chamberlain, Mr. Churchill has been the most considerable figure in our national life: Here he is seen with his wife (on right) and his daughter, Mary, after his return from the United States in June 1942

BELGIUM COMES INTO THE WAR, MAY 1940: King Leopold reviews his army, which finally was ranged alongside those of the British and French—but only for a brief spell before the capitulation

ONE OF THE GREAT PICTURES OF THE WAR: The retreat from Dunkirk—the scene as the British Army waded out to the little boats which brought them back from the beaches



THE OLD MARSHAL who is trying to govern a defeated France: Marshal Pétain speaks at a Cabinet meeting at the Hotel du Parc at Vichy

American comment about our efforts was acid. The Empire Training Scheme came into being—ultimately to ensure victory. The bitter winter was passed; the first of the Spitfires were operational; the Germans did not yet know the secret of the Asdic. Then came the overrunning of Holland and Belgium, and the B.E.F. was lured out of its fortified positions along the Belgian frontier. That was the first time that the Reconnaissance Corps went into action, though it travelled under a different name.

Advanced units were in Amsterdam on May 10. The overrunning of the supposedly-impregnable Maginot Line; the break-through of the supposedly impassable Ardennes sector; the crack-up of the Belgian Army; the lack of communication among the French Armies and ours; the Battle of Louvain, in which the Royal Ulster Rifles behaved so gallantly; the sinister advance of the German mechanised divisions, cutting us off from the French along the line of the Somme—cutting the buttons off our trousers, in fact; the terrific effort put up by the R.A.F.; the embarkation from Boulogne and Calais; the perimeter of Dunkirk; the encircling of the 51st Division at St. Valerie; the embarkation from Le Havre and Cherbourg; Winston Churchill's dramatic attempt to link France and England together under a mutual nationality; the final collapse of France, are all still fresh in the memory.

The entry of Italy into the war was scoffed at. People did not realise the immense effect on naval strategy in the Mediterranean which it was to have.

On September 7, 1940, the "blitz" on London began. Goodness knows what would have happened if Göring had continued to batter our airfields instead of going for non-military targets. Some people think that the turning-point of the war occurred when a Wellington dropped bombs by mistake in the Unter den Linden and drove Hitler to a frenzy of rage—enough to order the *Luftwaffe* to make reprisals, instead of continuing its job on technical targets.

By the end of September it was clear that the first German offensive against Britain had failed. The next three weeks were marked by intensive diplomatic activity on the part of the Germans; Rumania was occupied; and Mussolini attacked Greece. Italian aircraft even attacked England, but not with great success. Squadron Leader Tuck's Spitfires sighted them first. A rival squadron heard him announce his discovery of Italians ahead.

"Where are they?" asked the rival squadron leader.

"Shan't tell you. We're only outnumbered three to one," was the reply.

Some doubt arises about the responsibility for the decision to send British and Australian troops to Greece to fight the second battle of Thermopylæ. It was thought to be based on political rather than strategical grounds. In the meantime the Italians seemed to be doing well in Abyssinia, but not for very long. The battle of the Atlantic was continuing relentlessly. The Prime Minister insisted on the English Channel still justifying its name, and ordered the Royal Navy to keep it open at all costs. The neutrality of the Irish Free State continued to be the subject of acrimonious discussion. It was clear that if we could use the naval harbours in the south, we could save hundreds of miles of steaming by our destroyers protecting the convoys. Meantime, the Germans reinforced the Italians in Greece, and that was that.

The "blitz" continued. Yugoslavia was overridden. Our troops in Libya began their retreat and proceeded to lose Benghazi. The official spokesman in Cairo encouraged the British public to believe that the German Afrika Korps was only two Divisions strong and would rapidly be destroyed. It was not.

The *Luftwaffe* switched its attacks from London to seaports. The last of the oranges were reaching London (except those destined for children and the R.A.F.). The A.-A. defences began to improve; the Home Guard was becoming quite a formidable force. May 10 occurred. No Londoner will forget that. Crete was overrun and captured. Lord's continued to provide cricket. Then Germany attacked Russia. It was clear that whichever way the campaign in the East would go, it would certainly shorten the war. English newspapers were shrinking more and more. Quentin Reynolds became famous overnight with a broadcast about Dr. Goebbels. It was suspected that the Germans were using gas in Russia. "Target for To-night" had its première. Laval was wounded at Versailles.

THE ENTRY INTO BENGHAZI BY THE BRITISH ARMY, in February 1941, at the termination of General Wavell's amazing advance throughout the whole length of Cyrenaica

Unrest was spreading throughout Europe. But not enough to incommode Hitler. The *Bismarck* had been relentlessly attacked and sunk.

Then came the Atlantic Charter, which offered the world an outline of a new order which promised more than the German new order could possibly do. Public attention was chiefly fixed on the war in the East. Then came Pearl Harbour. The Japanese made extraordinary claims about the number of American warships caught napping. This at last brought America into the war, in spite of the strong Isolationist movement.

The Pearl Harbour coup occurred at the peak point of the German advance on Moscow. Winter, which had been officially discredited as a deterrent effect on the German invasion, proved that it was insuperable, after all. German troops died like flies in the intense cold. Moscow was saved, although the time-lag between operations and the issue of *communiqués* was (and still is) very considerable.

WAR BY TERROR: The City of London under attack by the "Luftwaffe" when the first big attempt to burn the City was made in December 1940

Rommel had already appeared on the scene in Libya, and the ding-dong battles across the desert were in full spate. Rationing became acute in this country. The Japanese overran Malaya. Rubber was suddenly at a premium.

F.W. 190's were appearing in increasing numbers on the Western Front. E-boat Alley had already earned its nickname. The first American troops had reached this country. Raids on the German-occupied seaboard of France were taking place at regular intervals; the Russians were giving ground everywhere except in the Don elbow; "Baedeker" raids took place on York, Norwich, and other cathedral cities in feeble but precise reprisals. For the start of our mass-bombing raids on Germany the first 4,000-pounder bombs had been dropped devastatingly on big German cities. The Japs were threatening Australia; General MacArthur rocketed to fame; Malta still held out and won the George Cross; a succession of Generals came and went in Libya; Voronezh and El Alamein became front-page news. At long last Churchill visited Stalin, and tanks were landed on the French coast for the first time since 1940.

It is a confused account of a confused war. Astrology has been downfaced. So have the armchair critics. Every family in Germany seems to have lost at least one member in Russia. The oil wells of Baku are threatened. Finland has seemed for months to be on the brink of surrender. Once again Double Summer Time has come to an end. . . .

ONE OF THE MOST AMAZING EVENTS OF 1941, when Germany turned on Russia and Ribbentrop announced at the Foreign Ministry the despatch of the Note to the Soviet Union declaring Germany's aggressive intentions

THE TANKS AT DIEPPE

What Happened to the Twenty-eight Fighting Vehicles Landed on the Beaches; How They Behaved During the Great Raid; And the Possibilities of the Tank in Further Similar Operations

—Special Sphere Drawings and Notes

ONE of the most interesting features of the Dieppe raid was our employment of tanks during the operation. Their landing from special craft at the water's edge, awkward crunching up the shingle, battle royal on the promenade, then disappearance into the town and unknown adventures till the withdrawal and the blowing-up of many—the subject is as fascinating as it is important. And it needs a lot of explanation.

What actually happened we have not been told. The available facts are that some twenty-eight tanks (German figures) of the Calgary Regiment of Tanks landed in shallow water "in face of terrific German fire" (this, and the rest of the story, from Vichy accounts), after which men of the Royal Canadian Engineers "cleared a way" for them at many points so that they could enter the town. (This would mean blasting away wire and other obstructions.)

Penetrating the town, the tanks then "swept everything before them with machine-gun fire." The ships outside kept in touch with them by radio, and eventually gave the order to withdraw by the same means. We have not been told whether many were, in fact, re-embarked, but know that several crews destroyed their vehicles by prepared charges before departing. The Germans claimed all twenty-eight to have been "destroyed," though by whom they did not say.

But we can use our knowledge of previous tank battles in towns to shed some light on the darkness, first a baleful light. It has been demonstrated repeatedly that armoured vehicles are at their most vulnerable in towns, especially medieval towns like Dieppe, with narrow streets. This is because the strength of tanks lies in their mobility, restricted by the buildings, and in their armoured advantage over infantry, who can seek the protection of prepared buildings in towns.

The few tanks we had in Calais at the end of the Battle of France were like helpless monsters in a trap bristling with snipers. Another disadvantage is that you cannot see enough of what is happening, especially in the upper storeys of the buildings above you. Then—and this must have been a great difficulty in Dieppe—smoke from screens and bombs, together with fumes and heat from burning buildings, make the crews feel that they are fighting blindly in an inferno. At close quarters the defenders can employ a variety of disabling measures.

These range from shooting through the slits with rifle or machine-gun to blinding with smoke ammunition, from throwing bundles of stick-grenades under the tracks to hurling petrol-flasks, from jumping on the roof and damaging the barrels of guns with crowbars or heavy hammers, to laying rolls of wire to entangle the tracks. Then the vehicles, concentrated in narrow thoroughfares, are much more vulnerable to bombing than in the open country. But that is enough of the disadvantages.

If tanks are vulnerable in narrow streets, it is only a *relative* vulnerability. Unprotected infantry would be still more exposed. A nest of riflemen snipers or machine-guns at a street corner might detain a company of foot soldiers for hours and cause heavy casualties. One tank, especially when appearing unexpectedly, could throw off the hail of bullets without flinching, and then, perhaps, blast the nest away.

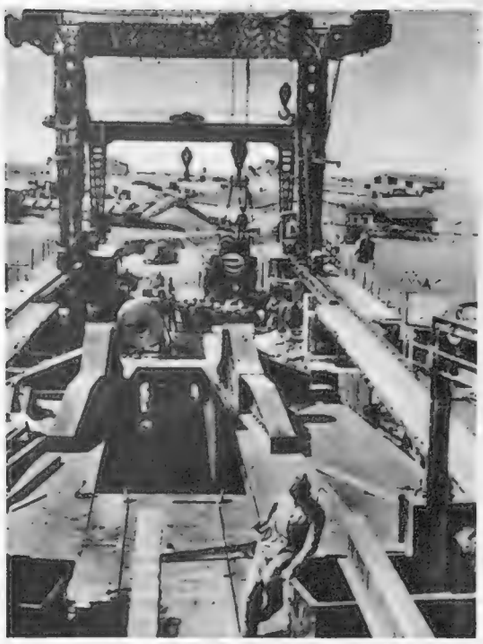
The Germans themselves have always used tanks to lead town assaults, employing what they call the "grape" formation—tanks first, supported by mortar- and light-artillery fire, followed immediately by infantry in a bunch.

The point about the tank is that in spite of all experience, it retains, like the dive-bomber, its psychological advantage. Those German defenders of Dieppe might have been hardened by many campaigns, but, after months of inactivity, the sound of our tanks, accentuated to a grating roar by the acoustics of the tight-packed town, must have been, if only momentarily, a paralysing shock to them.

Therefore our armour, however small-scale, was probably sufficient to confuse and hold at bay a large number of Dieppe's defenders while our other units set about their appointed tasks of demolition

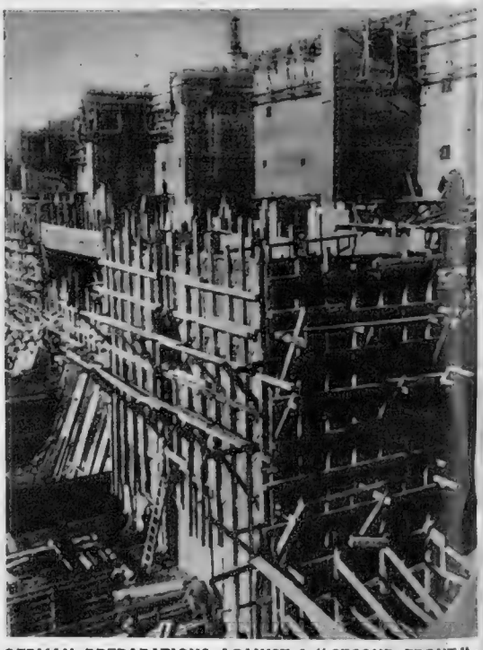
THE PART OF THE DESTROYERS DURING THE BIG ASSAULT ON DIEPPE: A British vessel rescuing men from badly-damaged landing craft after the latter had been backed away from the shore. Only one destroyer was lost during the heavy and close actions—*Drawing by Montague Dawson*

During the raid, as was to be expected, our naval losses included a fairly large number of landing craft: the only other loss was that of H.M.S. *Berkeley*, one of the small 900-ton Hunt class, which was so seriously damaged that she had to be sunk by our own forces. These facts would lead one to the belief that the stories put out by the Germans to the effect that numbers of cruisers and transports were lying off Dieppe whilst the shore operations were in progress were quite untrue: in all probability, the close support to the Commandos was provided only by the handy destroyer and by the sprightly M.L.s and M.G.B.s. It is known that destroyers were successful in lending assistance to the personnel of some of the damaged landing craft in a fashion similar to that depicted by Mr. Dawson in his drawing above



THE GERMAN "WATCH IN THE WEST": "While the Allies have been talking (!), German fortifications stretch from Biarritz to Kirkenes," says a recent German newspaper in connection with the above picture, published just before the Dieppe raid. "A few days ago the millionth cubic yard of fortified space was completed. The armoured concrete used resists every kind of bombardment, and these fortifications now form an unbroken chain which not only prevents any landings but offers absolute protection to the batteries mounted along the coast

"CORSAIR" RETURNS FROM AN AUGUST TRIP TO FRANCE: A Bren-gun carrier which took part in the operations returns to Britain on one of the special landing barges



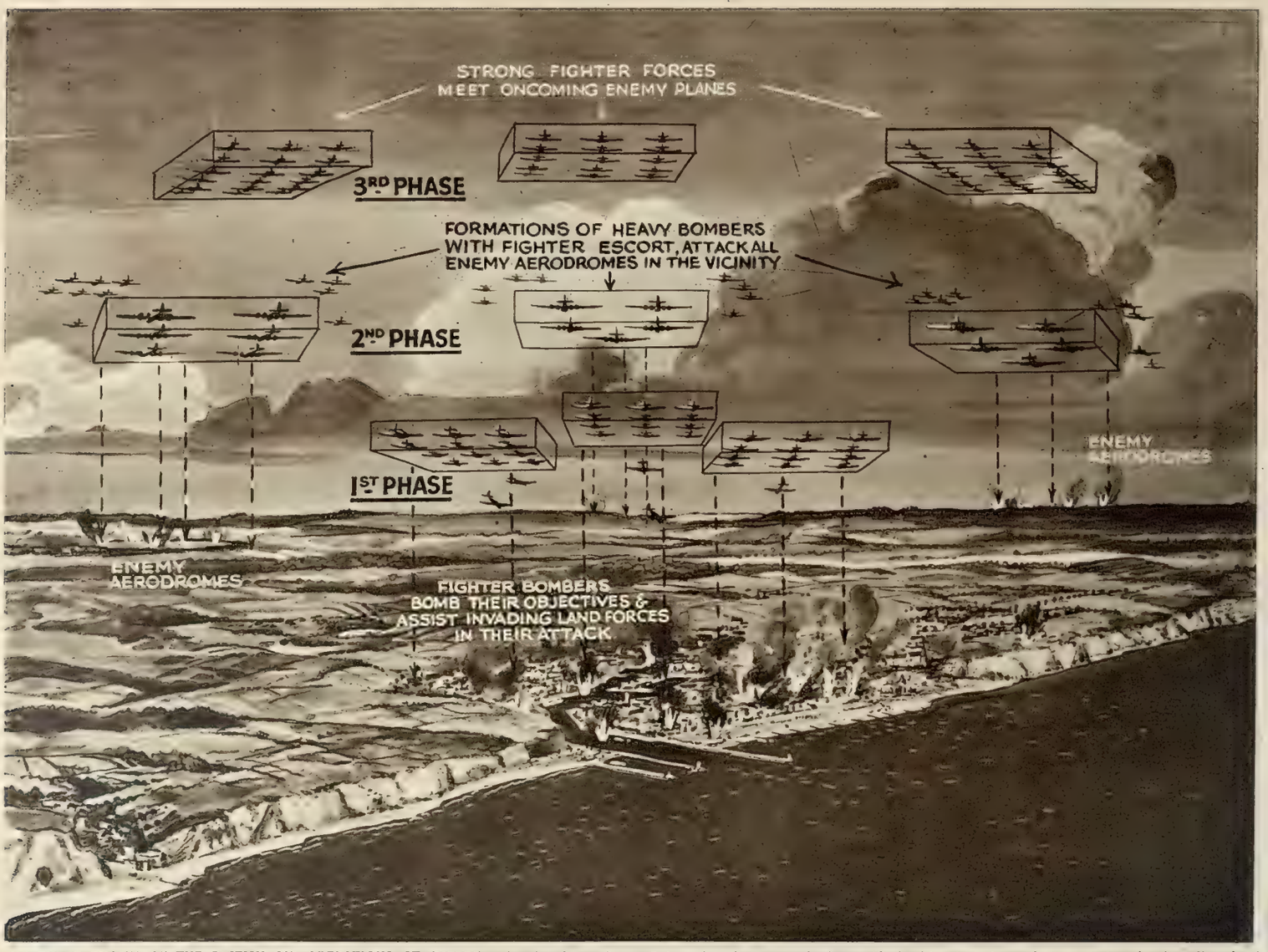
GERMAN PREPARATIONS AGAINST A "SECOND FRONT": The Nazis have been employing hundreds of thousands of labour conscripts from the conquered territories, who are forced to toil by day and night to erect walls of steel and concrete intended to be bomb- and invasion-proof. But the work is still not finished: there are serious gaps in the defences. Even where the defences *have* been completed, they are still vulnerable—as Dieppe has demonstrated. This picture, from a German source, shows a colossal erection along the Atlantic coast still under construction

THE TANKS IN DIEPPE: Their adventures in and about the town included an advance along the promenade towards the old castle on the bluff. They then disappeared from sight, and what happened further can only be guessed at—*Drawing by Percy Home*

Above—The tanks had initial difficulty in getting into the town, owing to the strength of the enemy's barbed wire and other tank obstacles, which took a little time to overcome. Once the tanks were through, they managed to do some considerable shooting-up, encountering at the same time very stiff opposition from the defence. Some tanks got on to the well-known promenade, with its flanking gardens and hotels facing the Channel. They found that the hotels were full of Germans and that, besides these converted strong-points, there were specially-constructed ones at various points. As the tanks advanced, they had on their left the strongly-built twin bastions of the old harbour gate and in front towered the circular towers and walls of the medieval castle, long used as a barracks for French troops. The airy, Eastern-looking structure of the Casino on the right proved to have been strongly reinforced, and this was naturally a danger-point for the tanks as they advanced towards the castle in order to turn left into the town itself. Soon some of the tanks could be heard reporting damage—unable to proceed, but giving the enemy plenty to think about before they were overwhelmed by superior strength

Below—Following the infantry in the assault upon Dieppe came the tanks. These had been ferried across the Channel in special flat-bottom craft. Landings took place on the beach, which extends from the harbour westward, past the Casino and castle to the shingly foreshore beneath the high white cliffs which here reassert themselves. In this pictorial diagram a westernmost landing-point is shown. So hot, however, was the enemy fire that a number of tanks were immobilised at the start and had to fight out their battle where they stood. To their right were the high white cliffs, with a cleft running down to the shore from the scattered houses above. The enemy could make dangerous use of these positions, as well as from the lower level of defence walls. Some tanks managed to extricate themselves from this hot corner, but a number had to form a hollow square and continue resistance from this formation during the rest of the day. Counter-fire was good; Germans could be seen toppling from windows of houses as the fierce give-and-take went on. Fighter bombers brilliantly aided the tanks and at 4 p.m. the latter provided effective shelter for the final evacuation of the troops

THE BRITISH TANKS KNOCKED OUT BY ENEMY GUNFIRE ON THE BEACH were able to group themselves into a protective strong-point to aid in the re-embarkation of the Commandos later in the day: Here the landing barges came up to the shore, under cover, to take their complements back to England—*Drawing by Percy Home*



THE THREE PHASES OF THE BRITISH AIR OPERATIONS AT DIEPPE: In the first phase, fighter-bombers attacked specified objectives in order to assist the invading land forces during the initial stages; in the second phase, heavy bombers, accompanied by fighter-escorts, carried out attacks on all enemy aerodromes within striking distance of Dieppe, to prevent air aid being given to the ground defences; in the third phase, fighters met oncoming enemy aircraft called up by the Germans from distant parts, and engaged them before they could reach the scene of action.—*Drawing by E. G. Lambert*

"CLOSE SUPPORT" in the DIEPPE OPERATIONS

A New Phase in our Air Warfare Exemplified by the R.A.F. in Their Support of Ground Operations

"The new R.A.F. close-support tactics were put into operation in Western Europe *for the first time* . . ."—*The Times*

"WHERE are our planes?" This has been the constant question of our men in almost every battle of the war. Often the answer has been, as in Norway, Greece and Malaya, that our local air arm has been too weak numerically to be much in evidence. Often, as in the earlier stages of the present Libyan campaign, the answer has been that they have mainly been used in attacking communications and the enemy's rear. Neither answer is particularly satisfying to an infantryman when he is staving off vigorous, simultaneous attacks from dive-bombers and tanks.

Only in the last week or so has the situation shown much change. The forces we landed at Dieppe had a generous and effective air "umbrella." Reports from Libya indicate that our men there are now being given close support from the air in all combat sectors. The change may be due to the forceful impact of recent events on the command, or to the very recent availability of suitable planes in proper quantity. Whatever the cause, it is a welcome reversal of our previous tactics.

The Dieppe raid has been officially described as the biggest air battle of the war, so far. Our machines made over 3,000 sorties in the 24 hours, ground-strafing pill-boxes, gun-emplacements and trenches with both guns and bombs. In this, its first major action, the Army Co-operation Command struck with impressive success. The destruction of the 6-in. gun battery which commanded the beach on which the main landing was made, was in a sense the pivot of the whole operation, and the crews of the Hurribombers, Mustangs and Spitfires told vividly how the German gun crews wilted under the hail of fire to which they were subjected.

The theory underlying close-support tactics is that in modern war no one weapon can give absolute ascendancy over the enemy. If decisive results are sought, the armoury must be well balanced and used as an organic whole. This breaks away from our old conception of the plane as a reconnaissance machine, and long-range bomber. It also obviously calls for machines of radically different types, and in this may lie the reason for our apparent delay in following the modern school of thought. It is significant, for example, that the fighter-reconnaissance machine adopted by Co-operation Command is the American Mustang. One should assume from this not that we are incapable of producing a suitable plane, but that the decision to utilise them came so late that it was preferable to buy what could be got ready-made from America rather than to wait while a new type could be inserted into our already overcrowded production lines. Moreover, close support calls for machines in fantastically large numbers. The fast single-seater is limited to a radius of about a hundred miles from its base, with an endurance of about two hours or less, depending on the actual amount of "flat-out" flying and fighting done.

There is not much point in trying to increase the cruising radius of the machine, since its fire-power, though devastatingly heavy, is extremely brief. About ten seconds' firing at the maximum rate is the hitting power of most of our machines, while the much-vaunted Focke-Wulf 190 can shoot for only 7½ seconds at its maximum rate. The losses, too, are very heavy both in men and machines. When flying at speeds of over 350 m.p.h. at heights of less than a hundred feet, which are the common conditions of close support, any fairly serious hit is likely to entail the loss both of plane and pilot.

Apart from specialised machines is the need for specialised pilots. By contrast with ordinary raids, where air crews can be "briefed" with the fullest descriptions of their objective and the target they are in particular to attack, little can be told the close-support pilot except that he is to get in the thick of the fight and give his comrades on the ground all the help he can. A well-trained co-operation pilot, by a timely attack on a well-entrenched anti-tank gun battery or local strong-point, could save hours of precious time in an attack. A pilot less well trained might waste the precious seconds of his fire-power, or the only two or four bombs he carries, on an objective of no immediate importance at all. And his assessment of the situation must be made while flying almost at

These are some of the bombs rained on the German defences at Dieppe by the R.A.F. They were carried by the Boston aircraft which took part in the raid

ground-level, at not less than 300 m.p.h., and while subject to heavy *flak* and fighter attack. While he will certainly have wireless communication with the ground troops, it is possible that, as the Germans did in Crete, he will receive rocket-signals from his comrades below and render help of the nature the code calls for.

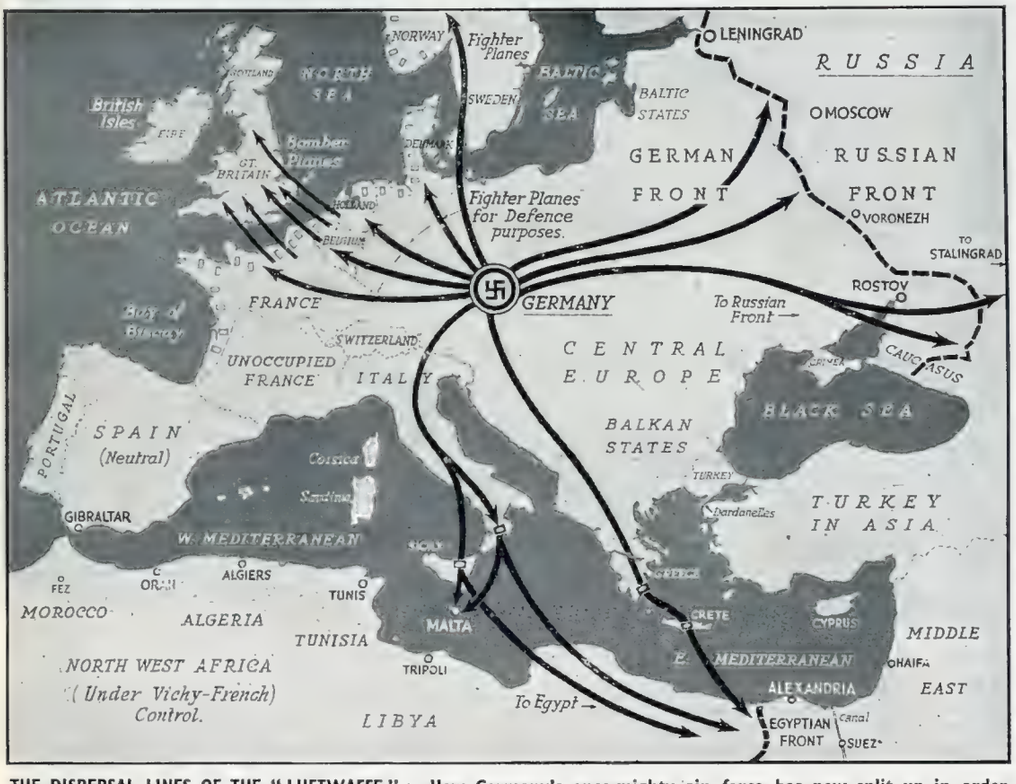
But, just as the close-support pilot will be the friend in need of his ground troops, so he himself will need a fighter-screen to shield him against higher-flying enemy fighter machines which would otherwise find him easy prey. And, besides providing the fighter-screen over the immediate combat area, raids will also have to be made on enemy aerodromes in the locality. In the Dieppe raid, this was one of the tasks assigned to the American Air Corps, who raided Abbeville airfield in their Liberators, the clear weather prevailing in the early part of the attack enabling these high-altitude precision bombers to work with deadly effect.

So complex is close-support work, therefore, that it may entail the use of machines of every type, from fighter to four-engine bomber, over areas of hundreds of square miles. Those who see in the dive-bomber the beginning and ending of army co-operation little realise the complexity of the task. Though the whole of the *Luftwaffe* is an army-co-operation force, the Nazis still found it necessary to have special *Schlachtgeschwader* or battle squadrons, who really did the work of breaking the way for the ground forces through the opposing defences, not only where the artillery could not be brought to bear, but also in conjunction with it.

Fighters, Stukas, Dornier 217's, and other types as well, comprise the battle squadrons. It was such squadrons, not dive-bombers alone, which broke through the French positions on the Meuse and the Russian defences at Sevastopol and on the Kuban. Now that America is providing us with planes of types not made by us (or not made in sufficient number), we, too, can put large well-balanced battle squadrons in the air. And as Dieppe showed, we know how to use them at least as well as any German theorist.

A. F. Crichton

A fighter formation actually on its way to cover the land operations at Dieppe: These aircraft of Fighter Command were an essential "rib" of the "umbrella" which covered our forces on the ground during the big raid



THE DISPERSAL LINES OF THE "LUFTWAFFE": How Germany's once-mighty air force has now split up in order to fight on several fronts, as well as protect 2,000 miles of occupied coastline, provide cover for her Mediterranean convoys and night-fighters for Allied air raids over Germany itself

The STRAIN on the "LUFTWAFFE"

An Air Force which is Now Fully Extended in East and in West

THE Dieppe raid will have repercussions throughout Europe. It produced a great air battle, and the results of that battle will be felt throughout the entire *Luftwaffe*, already drawn taut like an elastic-band along the coastline of occupied Europe, down the length of the Mediterranean, along North Africa and the Balkans, and over the 2,000 miles of the extended Russian front.

This new strain has been produced at a crucial moment for the *Luftwaffe*. German production in aircraft is falling off. Losses on the Russian front are high. Losses in Africa have to be made good.

The Dieppe pounce by the R.A.F. covering the Commandos caught the *Luftwaffe* napping. The first flights of Messerschmitts were brushed off the sky like crumbs from a table. Von Rundstedt had to call up reserves from the Low Countries, and he probably managed to get about 400 aircraft into the invaded skies. After the operation he was left with only about two-thirds of that number effective.

Remembering the essential fact that the *Luftwaffe* depends, above all else, on mobility, this is a vastly-important result. Von Rundstedt will have to make good those losses with front-line craft. He can't afford to take a chance. To-morrow, the Commandos may return. Those front-line craft will have to come from another front—unless reserves scheduled for the Russian front are drawn upon. Either way, that elastic-band has been drawn thinner—dangerously thinner—somewhere along its enormous length.

The effective strength of the *Luftwaffe* has generally been considered as some 1,400 planes in Western Europe, with perhaps 600-700 in Central Europe. On the Russian front, front-line craft number most likely less than 2,000—probably 1500-1,700 is a true estimate; while the Mediterranean campaigns against Malta, Allied shipping and the 8th Army have probably demanded the employment of some 1,300 aircraft. Front-line effectives, in all, number probably less than 5,000. A year ago, the figure was somewhere in the region of 1,200 more than this. The *Luftwaffe* is being strained, all right.

In Northern France and the Low Countries there has been a concentration of the F.W. 190's, which, so far as we can tell, has not appeared on the Russian front, where the Me. 109 has been the *Luftwaffe's* chief fighter. But von Rundstedt has kept Me. 109's on the defensive along the Channel coasts. It is estimated in some quarters that he has half the *Luftwaffe's* total fighter force—the better quality half, too—facing Britain. His Me. 110's, with their longer range, are sent prowling with He. 115's (floatplanes) and He. 59's (torpedo-carriers), while he is relying upon the speedy Dornier 217 and the He. 111 for the "reprisal" raids demanded by the High Command. Part of von Rundstedt's job, when he took over in occupied Europe, was to stabilise, as far as possible, the air front.

Elsewhere there had been changes, and change is a bad thing for such a weapon as the *Luftwaffe*.

For instance, there was strain in Africa some few months ago, when General Bonomi, an experienced Italian, was given command of a new reconnaissance wing of the *Luftwaffe* in North Africa. It was the first wing to be fitted out with the new He. 177 bomber, with a range thought to be something like 3,000 miles. Change brought further change. General St. Frohlich, who had been in command of the joint Axis Air Force since 1941, recently gave way to General Hoffman von Waldeau. Field-Marshal Kesselring, in effect, had tried to do what von Rundstedt has tried—to stabilise his own air front. He had three experienced air generals to perform this task—Lorzer, Geisler (in charge of combined operations) and Waldeau himself, who had been on the staff of the High Command since the beginning of the war. Yet the Allies have steadily maintained air superiority on the Middle East front. The strain on the *Luftwaffe* there is unrelieved.

In the Balkans, General Student remained with his crack airborne divisions until the drive into the Caucasus started. The slaughter wrought by the Russians retreating methodically necessitated the use of his paratroops on that front—*as infantry*. General Richthofen's "shock" air fleet was also drawn into the Russian conflict, to replace losses. Richthofen's movements reveal clearly the essential strategy of the *Luftwaffe* concentrations. Depending, in the main, upon mobility, so that it can be concentrated to give effective cover to an advance by Panzers and motorised infantry, the *Luftwaffe* has been shuttled across the Russian front. Richthofen and his fleet were in the concentration on Kerch, then they were shuttled to the Kharkov area, afterwards to Sevastopol, and more recently into the Caucasus.

But mobility in itself begets strain, as was shown in the west during the spring, when bombers were withdrawn from Northern France to attack and intercept the convoys to Russia. Before they had effectively done their work of interception, they were withdrawn once more for the "reprisal" raids on Britain, while, to cover the fresh thinned-out piece of the elastic-band, four-engined F.W. Kurriers were employed in a relay shuttle system. First they operated from bases in the Bay of Biscay, flying north-west to Cape North. Next they raided south-east from these fresh bases back to the Biscay. It can be expected that this emergency system produced a higher percentage of wastage.

Meantime, von Rundstedt has to repair his latest losses, thereby increasing the general strain on the extended German Air Force. He faces fighter offensives of growing depth, and has to look to the soft kernel behind him. For Europe, to the R.A.F., is much like a nut, with a hard shell—the *Luftwaffe* and *flak* defences—and soft interior—where there are but few aerial defences. Von Rundstedt knows that the *Luftwaffe* in Russia lacks fighters. If it didn't, the Russian medium and heavy bombers would never be able to attack the German rear in the way it is being attacked. Rommel wants all the craft he has got, and can get. The wastage among the squadrons based on Sicily remains high, and the Balkans are a weakened zone.

Having thrown half his fighter strength—which was probably some 800 aircraft—into the defence of Dieppe, and lost a sixth of that total strength, von Rundstedt can't be feeling too happy. Behind him, on the airfields of the Ruhr and Western Germany, remain only the reserve of night-fighters, with which the four-engined giants of the R.A.F.'s Bomber Command are learning to deal quite effectively. Yet he must have planes or suffer another severe mauling. He knows that. *Luftwaffe* chiefs all around Europe know that.

Perhaps the elastic-band is not far from snapping—somewhere.

Leonard R. Gribble

"LANDING ON" IN DIFFICULT WEATHER CONDITIONS: When an aircraft-carrier pitches in a big sea the inclined deck presents additional difficulties to the pilots ready to "land on." (A striking incident of this kind is described in the recently-published "Ark Royal" booklet)—*Drawing by Montague Dawson*

The landing deck of an aircraft-carrier is limited enough in size in the best of conditions: when there is a rough sea running, and aircraft *must* take off and land on whilst the vessel is heaving and tossing in the huge waves, the most expert handling is required from the captain of the carrier and from the pilot of the aircraft. The aircraft must fly off and land on into wind. "The required wind-speed over the deck depends on the type of aircraft and the load carried," says the recently-published booklet on the *Ark Royal*, issued for the Admiralty by the Ministry of Information; "when there is little natural wind the carrier must steam fast, and slow when the wind is high. When the force of the wind is over 45 knots it is difficult to keep the aircraft on deck as their flying-off speed is little more. Even in a wind of 45 knots they tend to rise vertically from the deck and have to be brought right for'ard lest they should strike the island." Then, in describing actual operations during bad weather, the account continues as follows: "There was much motion on the ship, and green seas were breaking over the fore-end of the flight deck, normally 62 ft. above surface-level. The whole deck was drenched with water and as slippery as a skating-rink. Several of the aircraft slid from one side to the other while being ranged. The first one took off with her wheels in salt water, and the pilots who followed had to go through the driving spray. As the ship pitched in the heavy Atlantic swell, some had to make the run uphill when the ship lifted; others went roaring downhill. . . . They had great difficulty in landing on. There was a very high sea running, and the rise and fall of the 'round down' at the after end of the flight deck was no less than 56 ft. The drizzle and low clouds made the deck hard to see, and although the carrier was steaming only eight knots there was a 40-knot wind over the deck. Some of the Swordfish, coming in when the stern of the ship was rising and falling too quickly, had to be waved away three times. As each aircraft landed on, the wings had to be folded immediately and the deck parties had to hold it against the gale until it could be struck below." Mr. Dawson's drawing reproduced here shows the scene at sea, with the flight deck cleared to receive aircraft returning in wild weather to land on the tiny floating platform. The vessel depicted is of the Illustrious class of 23,000 tons

THE UNITED STATES AIRCRAFT-CARRIER "WASP," the vessel which undertook two ferry journeys to Malta with R.A.F. reinforcements of planes and pilots. This is one of the first pictures to be released of the newest of American carriers

On the morning of Easter Sunday, April 5, a U.S. Naval Task Force arrived in home waters to join the British Home Fleet. This Force was under the command of fifty-six-year-old Rear-Admiral Robert Carlisle Giffen, who holds the Navy Cross for his services as Commanding Officer of the U.S. destroyer *Trippe* in European waters during the last war, when his vessel was based on Queenstown. The Task Force included the aircraft-carrier *Wasp*, which subsequently undertook two ferry journeys to Malta with R.A.F. reinforcements of aircraft and pilots: Mr. Winston Churchill mentioned this great help at a critical moment in Maltese history during a recent speech. The picture reproduced here was taken from the deck of H.M.S. *Edinburgh* (the cruiser which was lost later whilst protecting our North Russia convoys). *Wasp* was launched as recently as April 4, 1939: she is a vessel of 14,700 tons, capable of carrying seventy-two aircraft

FLYING FROM AIRCRAFT-CARRIERS

From the Point of View of the Pilot

Much—possibly too much—has been written of aircraft-carriers from the strategic angle. Very little has been written about them from the pilot's or operational angle. Before doing so, though, it may be as well to put on record that they *are* popular ships with flying personnel, that the air-crews themselves know full well the value of the work the carriers, and the carriers alone, are able to do, and that no aircraft-carrier, as yet, has been sunk by bombers from the shore. Only one of ours, the old *Hermes*, has even succumbed to attacks by other carrier-borne planes. Submarines and heavy surface ships have been responsible for all the rest of our losses. Despite the common criticisms, therefore, the carrier is likely to remain an important and increasingly numerous component of our navies.

The carrier-borne aircraft of the Fleet Air Arm now consist mainly of six types—five British and one American. The British are the old Swordfish, a 150-m.p.h. torpedo biplane, with a crew of two or three; the Albacore, a rather more modern version; our only dive-bomber, the Skua, which sank the *Kœnigsberg*; the Roc, a two-seater fighter comparable to the Defiant; and lastly, the Fairey Fulmar, an eight-gun fighter of excellent performance and design.

The American representative in the Fleet Air Arm is the Grumman Martlet, claimed to be our fastest carrier-borne fighter, with a speed of 325 m.p.h. The *Illustrious*, for example, had a mixed complement of Martlet fighters and Swordfish torpedo-planes.

Actual flying operations from a carrier are at once oddly like and unlike work from an aerodrome. The island superstructure replaces the land control-tower, the shepherding destroyer replaces the crash-wagon and ambulance, the main difference as pilots often feelingly say, is that they do not have to walk miles round an aerodrome periphery track to reach their machines.

The flight decks of the *Courageous*, *Glorious* and *Furious* were about 600 ft. long, the lifts which brought the planes up from below being naturally situated at the end of the runway. The most conspicuous features of the flight deck are the thick white traffic lines—a thin white stem-to-stern line on which the pilot "middles" his machine, and thicker marginal lines within which the wing tips must be kept to avoid the twin risks either of fouling the island superstructure, or going overboard. Right forward in the bows is a smoke-jet wind-indicator. This really concerns the quartermaster more than the pilot. If the ship is held head to wind the smoke jet will blow back exactly over the white centre line of the flight deck.

On a good flying day the procedure is simple, and though the take-off is always a mildly tricky business, it is soon over. The *Furious* and her consorts could steam at 30 knots, which, being added to the airspeed of the plane itself, meant that one usually came "unstuck" quite quickly. The last few yards of the flight deck ended in a slight hump, and one usually reckoned to become airborne just before this point, or within about 9 seconds of commencing one's run. It is important to come "unstuck" without any hesitation, so one usually held the machine down for a second or so after the theoretical take-off speed had been reached, then easing the control column gently back one came up and over the bows in a decisive power climb.

Undoubtedly the easiest machine for either take-off or landing is the Swordfish. "Stringbags," as this type was affectionately known, would land or take off at about 65 knots. If the carrier was doing 30 knots into the wind, as it usually was, one's own speed relative to the flight deck was thus only 35 knots, or 40 m.p.h., which made landing quite a comfortable, almost leisurely process. No sooner, it seemed, had the trailing hook caught in the arrester wires than the deck crew had hold of one's wing tips and one was being shepherded towards the lifts. With the later types, matters are not so simple, landing speeds of 85 knots mean that the landing plane will be speeding over the deck at at least 65 m.p.h., even with flaps down. It becomes vital then to touch down at the earliest possible moment, for every yard of runway is wanted.

The writer always found taking-off a more ticklish business than landing, though other pilots held the reverse view. For one thing, once the machine is fairly moving down the deck, come what may, one must carry on, while when landing there is always the option, even at the last minute, of reopening the throttle and making another circuit before coming in to try again. When taking off, too, a mysterious side wind used to materialise as one neared the bows, due to some freak effect. The *Illustrious* class, one notices, have been given large lowerable screens to shield the planes at this part of their run. The type of machine now being flown from carriers is proof, however, that our mastery of the technique has progressed rapidly. Still, no better advice could be given the navy pilot than the writer received from his own instructor—an ardent fox-hunter! "Taking-off is like jumping," he said; "you want to throw your heart over the hedge, and then follow it as quickly as you can"

H. C. B.

Below—**THE BRAVERY AND SKILL OF THE R.A.F. DEFENDERS OF MALTA**

—Drawing by Roland Davies (from photographic material)

This drawing gives an insight into conditions of the air war on and above Malta. The enemy have just appeared over the island, and Hurricane fighters are taking off to engage the bombers. The position of the aerodrome from which they are starting is exactly as shown here, right alongside the town of Valetta itself, with only the Harbour between aerodrome and capital

AIR-CONDITIONED TANKS?

Methods the Germans May Have Adopted in Libya

TRAVELLING at the equivalent of naval "action stations," a tank is almost completely "battened down." Direct visibility is limited to a few square inches of bullet-proof glass, and direct ventilation to what air can be induced through ventilation louvres on the underside of the tank—those on the "upper deck," so to speak, have to be closed in view of the opportunity they present to the accidental shell-splinter.

Inside the tank, the engine will be producing conditions resembling those under the bonnet of a car running flat out in bottom gear. In the case of a Matilda tank, the engines are two 6-cylinder 95 h.p. petrol units. In the smaller Valentine, it is an oil engine virtually identical with that of a London bus. Fuel is probably being consumed at the rate of a gallon a mile or more, and only about a quarter of the heat content of the fuel can be put to useful work by the engine. The rest of the heat has to be dissipated by the radiator and exhaust. Add to this the heat generated by the guns themselves, and the marvel is not that the conditions inside the vehicle should occasionally become insufferable, but that in such a campaign as that in Libya men should be found capable of enduring them at all. The Germans have claimed—how truthfully it is hard to say—that their tanks are "air-conditioned."

Technically speaking, it would not be at all difficult to devise means whereby the temperature of the crew's quarters of the tank could be kept below, say, 75 deg. Fah., no matter what the outside conditions. The principle of all refrigerating systems is identical—a suitable gas

THE NEW AMERICAN M.4 TANK, the most up-to-date of all fighting vehicles: This is now being turned out in mass on three production lines at a giant war factory in the Middle West—although construction of the arsenal itself began only six months ago! Among the principal developments in the M.4 Tank over its predecessors are increased fire-power and improved location of the 75-mm. gun in a turret which revolves in a complete circle. The vehicle also carries numerous machine-guns, with improved vision and sighting devices for the crew. In addition, it is highly manœuvrable and is protected by a tough hide of heavy armour plate

is circulated inside a closed system which includes a pump or compressor unit. In this unit the gas is compressed to such a degree that on being allowed to cool in another part of the circuit, it ceases to be a gas and becomes a liquid at a very low temperature—say, 30 deg. below freezing-point. If this cold fluid is now circulated under pressure in a pipe to the place which it is desired to cool and there allowed to expand, it will extract from its surroundings (in the process of returning to a gas) a considerable amount of heat.

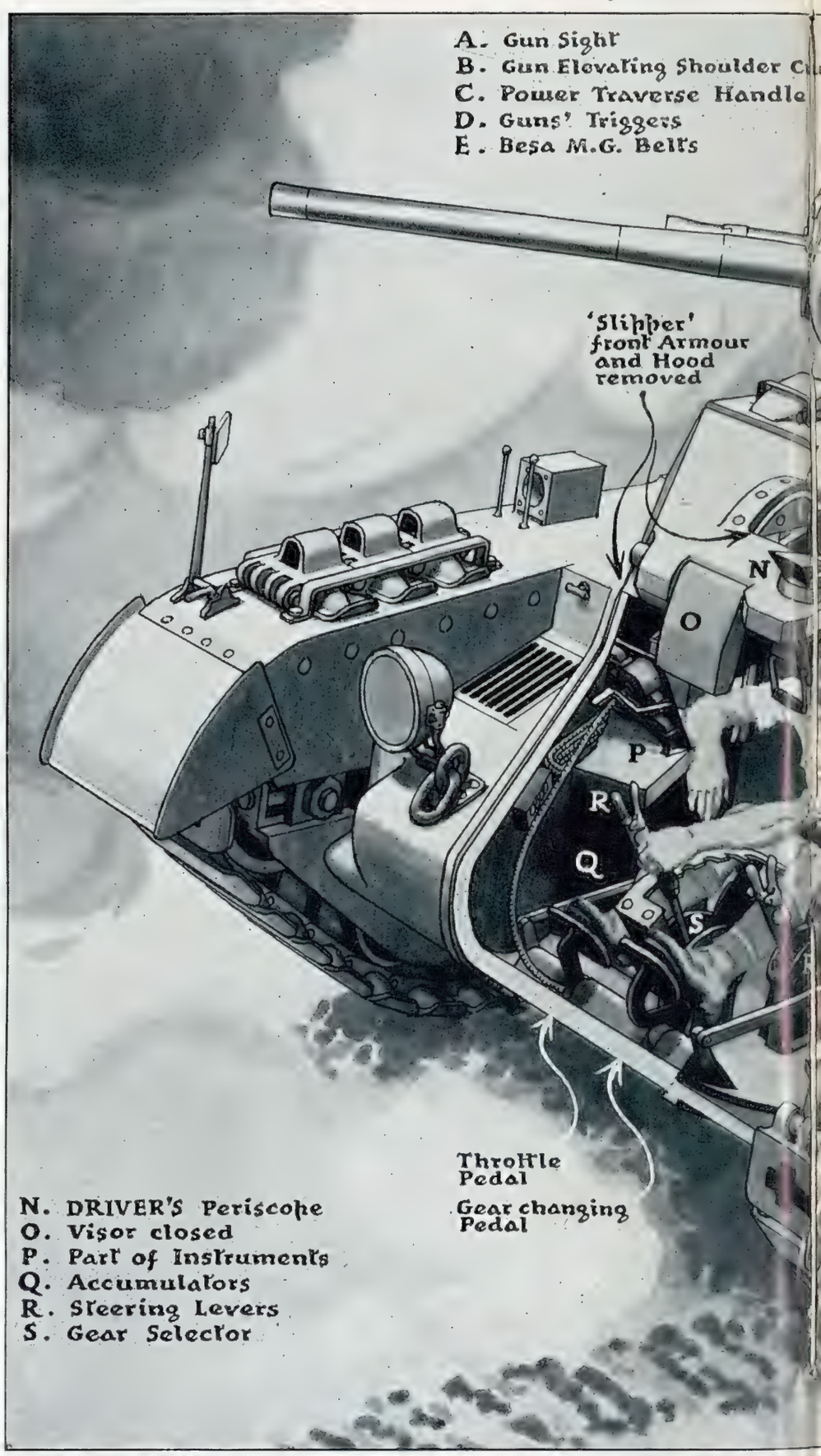
To apply the process to the tank, however, one would need to apply to the whole of the interior of the crew's quarters a layer of insulating material—say, cork three inches thick. Otherwise the heat taken in would quite overpower the cooling capacity of the refrigerator. All doors would have to be airtight, and air drawn over the cooling grid through apertures below the tank.

But, unfortunately, all suitable refrigerating gases are highly unpleasant if they escape—as they might very well escape if the cooling system was pierced by a bullet or shrapnel. One may take it for granted that the Germans have certainly not introduced any such dangerous substances into their Panzer vehicles.

What, in all probability, they have done is this. They have been at pains to isolate the engine compartment from the crew's quarters. A powerful fan will suck air in, and ensure that the atmosphere in the crew's quarters is always briskly moving, that the gun fumes, perspiration and stale air are never allowed to accumulate. Moving air (as we found in submarines), however polluted, is much more tolerable than air of the same "quality" which is stagnant or slow-moving. Probably, also, arrangements are made to extract the moisture by passing the air over a dehydrating agent, such as calcium-chloride.

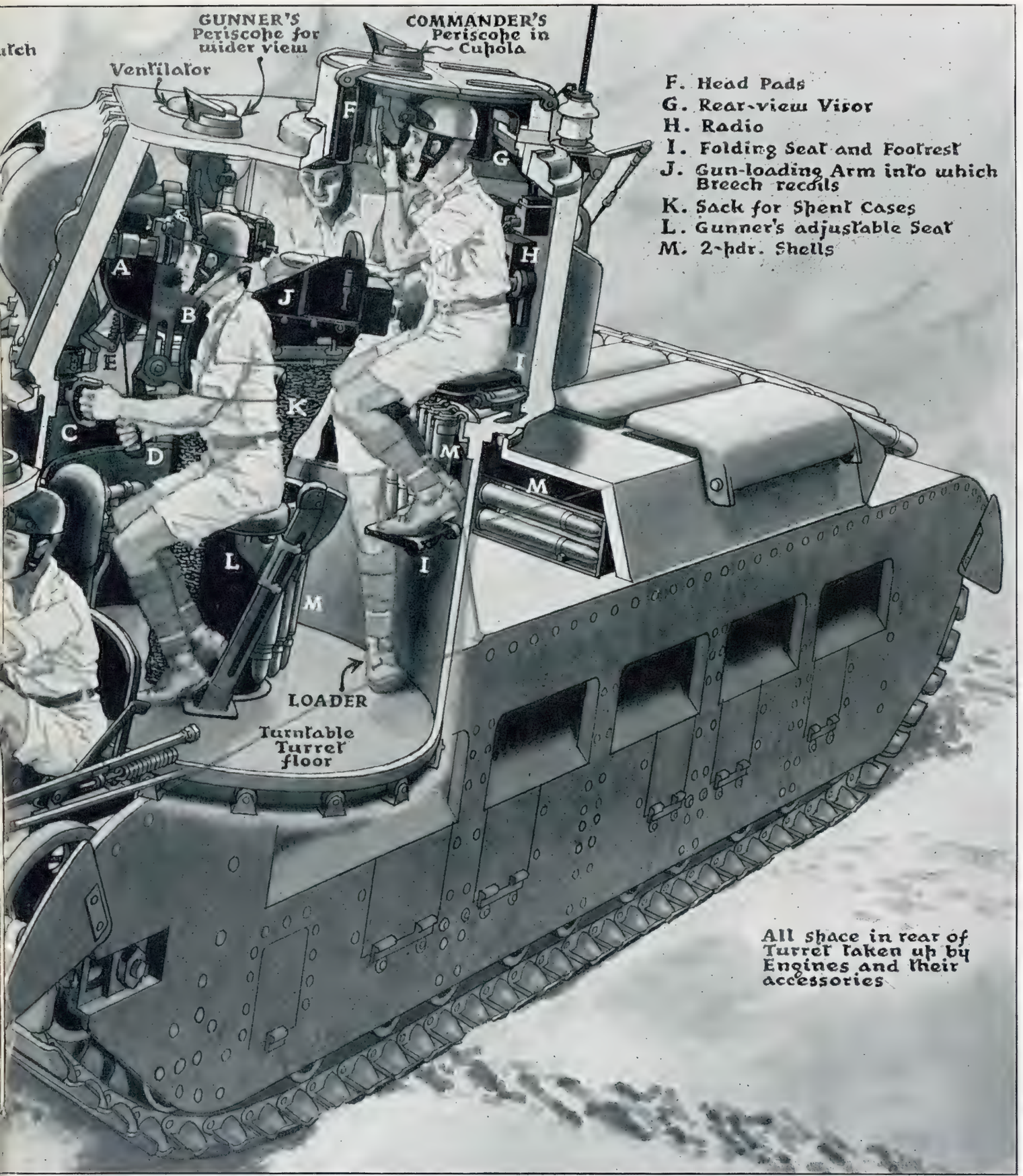
Comfort is largely a matter of personal reaction to one's surroundings, and a tank crew situated in a dry, if rather warm, atmosphere, with a fairly-invigorating, fan-produced breeze blowing round them would probably experience a degree of "comfort" (comparatively speaking) quite out of proportion to the actual difference in temperature. The cork insulation would also materially quieten the interior of the vehicle. It would also absorb the heat generated by shells and bullets striking the turret sides. How many readers realise that if, say, a two-pounder shell hits a tank's armour, even if it does not penetrate, it may produce for a second or so a dull red glow on the inside—due to the heat generated by the collision? The lot of such a crew would be far more pleasant than that of men in a similar vehicle, operating under similar conditions, but devoid of such refinements. Add to this the feeling that one has that "little extra something the enemy hasn't got," and it becomes plain that the Afrika Korps may have reaped advantages from its air-conditioned tanks out of all proportion to those which seemed likely.

E. F. Mason



A PEEP INSIDE A TANK: CLOSE QUARTERS FOR THE CREW OF FOUR WITHIN A BRITISH MATILDA. T... revolving cupola. The rest of the space within

Within the interior of a British (or any other) tank, space is very limited—it is, in fact, difficult to give any of the four members of the crew more than elbow-room. In this drawing by Mr. Clatworthy, a number of gadgets have had to be omitted for the sake of clarity. Each of the four men has plenty to do, so that the disablement of any one of them practically disables the tank. Were the loader to be knocked out, the gun could only be fired very slowly; with the commander out of action, the vehicle would suffer in direction as well. (The loader sees nothing of the outside world, and the others only observe specific points.) With gunner or driver knocked out, matters would be still worse: the driving-seat cannot be reached internally from the turret—and vice versa. Members of a crew are, of course, trained to deputise for each other. Brow pieces can be discerned fitted to all periscopes and visors: these allow the observer to keep his forehead pressed against them without shock from the lurching tank. Head-pads are also provided all round the commander's cupola: he can also steady himself by "strap-hanging." Several items of equipment which still further cramp the space are omitted for clarity



The four men are shown in their allotted positions—driver in front, gunner in centre, commander and loader behind: all except the driver are seated within the tank is occupied by ammunition, fuel and machinery—*Drawing by S. W. Clatworthy (Artist's copyright in the U.S.A.)*

LIFE INSIDE A TANK: How the Four Men are Disposed in their Several Positions

The normal tank crew consists of three or four men: commander, one or two gunners, driver and wireless operator, who also loads the heavy gun. The driver is now usually in a separate compartment. Once the tank has been closed down for action, only the commander sees much of what happens. He has a small visor and a periscope: the driver and gunner rely upon periscopes with limited fields of view; the wireless operator is "blind." The commander may be in direct wireless communication with the squadron commander, and he gives his orders through a telephone to the other members of the crew. In his rather cramped turret, he has to be continuously on the alert, studying and marking his map, picking out targets with his glasses, or directing his gun.

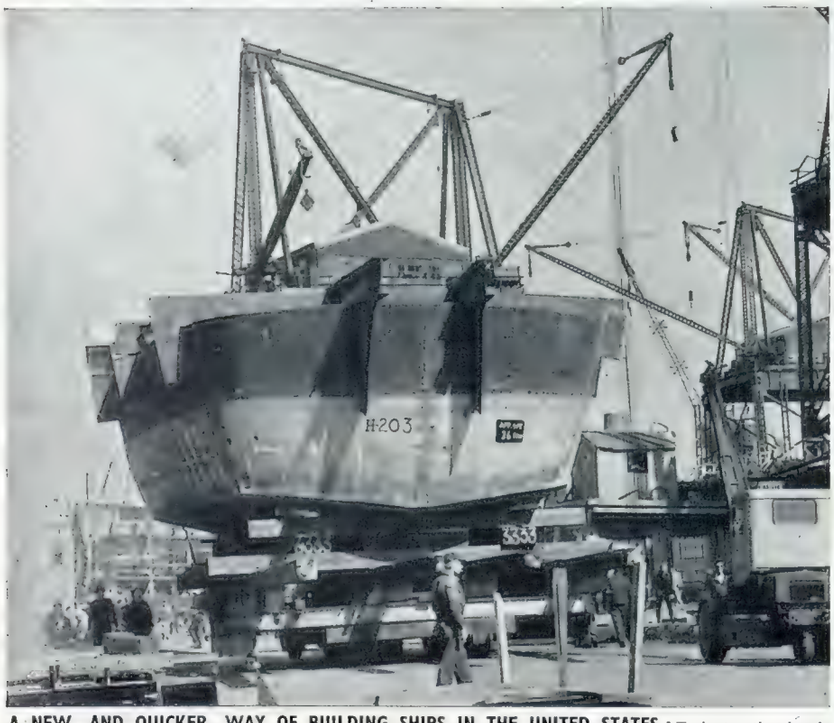
The gunner sits in the turret which, if it is power-operated, he can swing round with a mere touch of his left hand. He is generally seated to the left of his guns, which he fires by a trigger with his right hand. Just behind him is the wireless set. The wireless operator is on his left, in a convenient position to feed the two-pounder gun with shells. The positions, of course, may vary with different types of tanks, but this is a typical arrangement.

All these men are, to a degree, specialists, but they are trained so that if one falls out, another can take his place. The gunner will be able to manipulate the wireless set or drive in an emergency; the wireless operator to drive or fire the guns. The commander must be a master of driving, gunnery and wireless. It calls for complete confidence between members of the crew, and an understanding which can only be gained by practice together.

The crews of the earlier tanks were larger. The Mark V tank had a crew of eight men; the commander, usually a subaltern, three drivers, two of whom also manned machine-guns, and three gunners. It has been possible to reduce the number of the crew without loss of fire-power by making the guns able to fire in a complete circle of 360 degrees. In the first tanks, the guns could only bear on targets on their own side of the tank, so that more guns were required. This is an improvement the tank has borrowed from the Navy.

—From "Tanks," by Professor A. M. Low (published by Hutchinson)

A MERCHANT SHIP UNDER ATTACK firing steel wires from its rocket-guns to divert the enemy dive-bombers. The latter have to bank steeply if they are to avoid entanglement. In the centre foreground, a wire which has fallen into the sea is being hauled in, to be used again (See notes at right)—*Drawing by Wm. McDowell*



A NEW, AND QUICKER, WAY OF BUILDING SHIPS IN THE UNITED STATES : To hasten the already record-breaking pace of shipbuilding, the U.S. shipyards are employing new and progressive operating devices. Here, on the busy ways of one yard, an entire pre-fabricated section, weighing 36 tons, is about to be installed aboard ship in one piece. This is an application of the assembly-line method of construction which has been used so successfully in American industry. It has already produced some astounding results, and confounded critics both in the U.S. and here

THE AXIS ASSAULTS ON ALLIED CONVOYS

And the Counter-blows to Defeat the Attacks of Bombers and Submarines

Rocket-wires versus Bombers at Sea :

THE revelation that some of our merchant ships are now carrying rocket-guns marks a step forward in the progress of this weapon, which, against all expert opinion in former years, seems destined to play an increasingly-important part in warfare. The mechanism of the latest example is most fascinating.

This rocket does not act as a missile itself, but drags swiftly into the air above the ship a long steel wire, the bottom end of which is fastened to the deck. The top end is packed into the body of the rocket together with a small parachute which is attached to it. When the end of the wire's tether is reached, the end, with the parachute, naturally parts from the body of the rocket, the parachute opens, and for a brief period the wire stands upright in the air, supported by the parachute. Slowly the parachute comes down, and the curving wire with it.

The period of the wire's efficacy is limited, but is longer than the period a bomber can remain over or near a ship at low-level. In any case, as soon as one wire falls into the sea, another can be projected into the air ; and the fallen one can be hauled in for eventual incorporation in another rocket.

The basic effect on hostile bombers is intimidatory. The pilot is dissuaded from making the low-level attacks that alone can enable him to register a certain hit. It is as if the ship carries a long-wired barrage balloon, save that balloons can be shot down and slow down the speed of the ship always, whereas each of the rocket-wires can be replaced in a moment and need not be used save when the ship is being directly attacked.

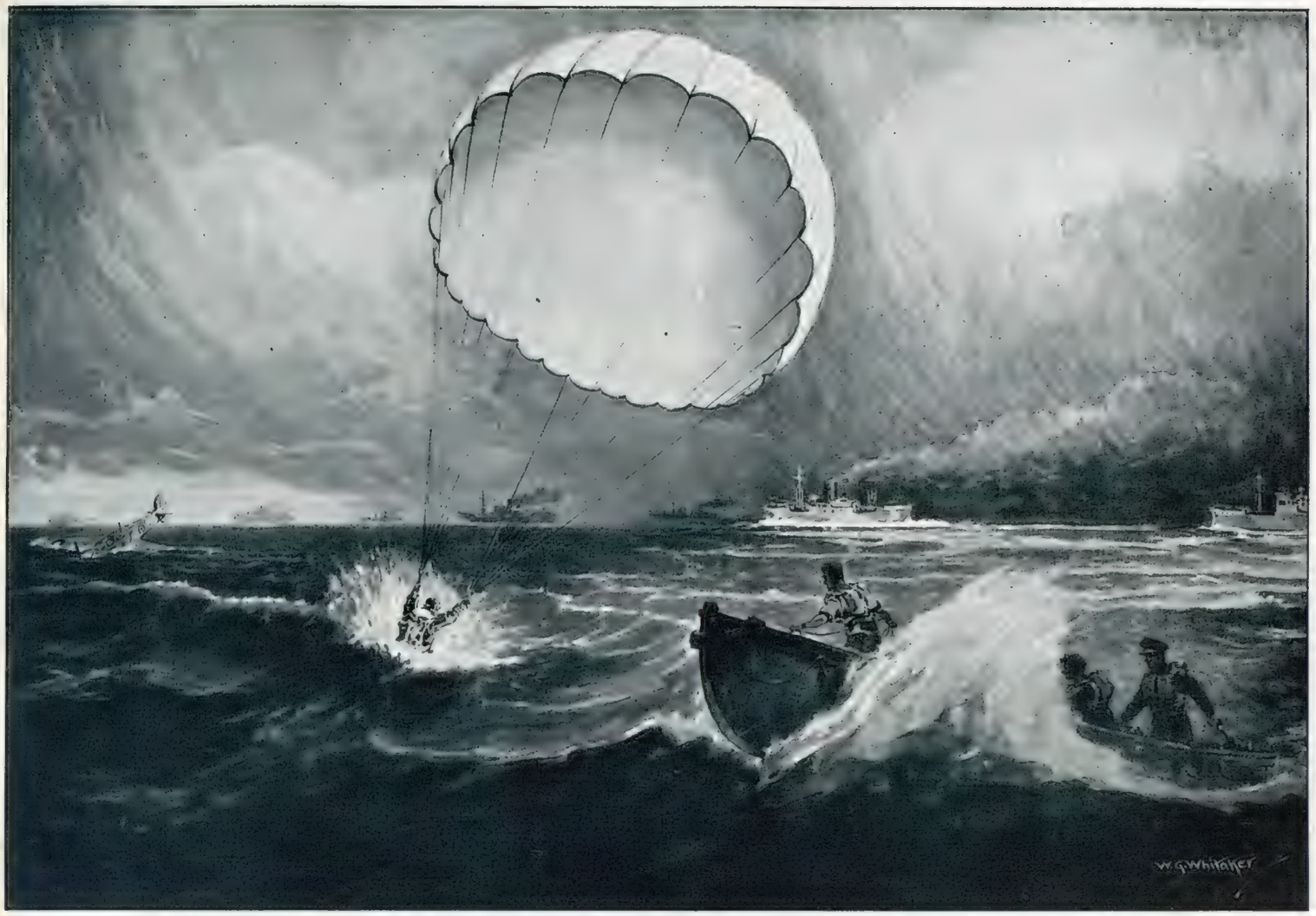
But the wires would not intimidate if the bombers were not aware that they are exceedingly dangerous. Already it is known that the *Luftwaffe* dislikes the weapon more than any other we have brought out of the basket. It is not just a matter of firing the rocket anywhere into the air above the ship. The men operating the release mechanism and the firer are carefully trained to aim the projectile in such a direction, in relation to the oncoming aircraft, that when the wire is cast off in mid-air it meets the aircraft head-on.

If it hits a wire the bomber is not necessarily destroyed. But it can be destroyed, especially if it becomes entangled with a number of hooks, just like those on a fishing-line, with which the wires are furnished ; and in any case, after one brush with the obstruction, it is in no mood for dropping accurate bombs, and may become a target for anti-aircraft fire.

The idea is not new. Implicit for years in the ordinary life-saving rocket, which carries a rope to the shore from a sinking ship, or vice versa, it also embodies the old principle of the linked-shot, embodied in those projectiles of Nelson's day which, consisting of two cannon-balls joined together by a chain, were used for cutting down the rigging of ships.

I.—AN R.A.F. ATTACK ON AN ITALIAN SUBMARINE—The vessel makes a violent turn to port in anticipation of the attack : Whilst carrying out a patrol in the Western Mediterranean, a Sunderland aircraft of Coastal Command surprised an Italian submarine on the surface. The Sunderland attacked with bombs : when it left the spot the commander of the aircraft was able to report that the submarine had received damage to the outer casing, which appeared to be bent back near the bows

II.—A STICK OF BOMBS EXPLODES NEAR THE SUBMARINE. Note the track on the surface from the right to the scene of the explosion



THE BRITISH AIRMEN WHO PROTECT OUR CONVOYS AT GREAT RISK TO THEMSELVES : The work of the "Catafighters," R.A.F. pilots who are shot off the catapult-ships of the convoy and who then have to make parachute landings in the sea—*Drawing by W. G. Whitaker*

It was only about a year ago that the existence of special "catapult-ships" was made known to the general public : since then there have been big developments in this very effective form of convoy protection. So much so that, up to date, not a single ship has been lost by bombing when a catapult-ship has sailed with the convoy ! Merchant Navy captains are in command of these special vessels, but naval personnel are in charge of the fighter aircraft and the catapult apparatus : the pilots are usually from the R.A.F., with a naval Fighter Director officer (usually a sub-lieutenant of the R.N.V.R.) to direct him to his target by radio telephone from the bridge. When the alarm is given, the pilot and aircraft are shot into the air by catapult—in itself a disturbing experience. After the enemy has been engaged and driven off, the pilot has then to take to his parachute. Thus, every fight costs the country an aeroplane, and every pilot takes a wetting—not always enjoyable in winter or in high latitudes ! The aircraft carried in the catapult-ships are mostly Hurricanes : their prey mostly Focke-Wulf bombers—long-range aeroplanes used by the Germans for attacks on the Atlantic convoys. When the pilot has abandoned his Hurricane and parachuted down to the sea, he is rescued by cleverly-handled, fast motor-launches. The "Catafighters" have been described as the bravest airmen of them all : yet the catapult-ship service is expanding rapidly, despite the risks involved, and volunteers have come forward in great numbers for this hazardous work. British, Canadian, South African, Australian and American pilots are all taking part in it

A NORTH ATLANTIC CONVOY UNDER ATTACK BY GERMAN U-BOATS : An intense attack by a large pack of submarines recently carried out by the Germans after a period of comparative quiescence—*Drawing by W. G. Whitaker*

Survivors of British and American ships who landed at a British port some days ago described the scene pictured above : losses were suffered amongst the vessels of the convoy, but the Germans are known to have lost some of the U-boats which helped in the attack. One survivor said : "I saw several ships hit and then my own was struck. Torpedoes were criss-crossing from all directions, but our escorts did magnificent work and the U-boats paid dearly for the hits they scored." An American merchantman captain also stated that, though the convoy "suffered heavily," the action was by no means one-sided. On this occasion, the German High Command made big claims—the first time for some months that they have claimed heavy action on this route

THE CAMPAIGN IN EGYPT

FREAKS of the DESERT ARTILLERY

How Our Gunners Overcame Great Difficulties to Hold Rommel at Bay

By DONALD COWIE

THAT it was primarily the work of our gunners which halted Rommel's drive towards the Nile Valley now seems certain. Metaphorically digging its heels into the sand at El Alamein, the Royal Regiment—and this goes also for its Australian, New Zealand and South African branches—kept the Hun at bay with a technical display seldom equalled in the history of artillery. Since then the same arm has steadily maintained that barrier, holding an easy mastery over the German and Italian batteries. The achievement can only be appreciated if the difficulties are understood.

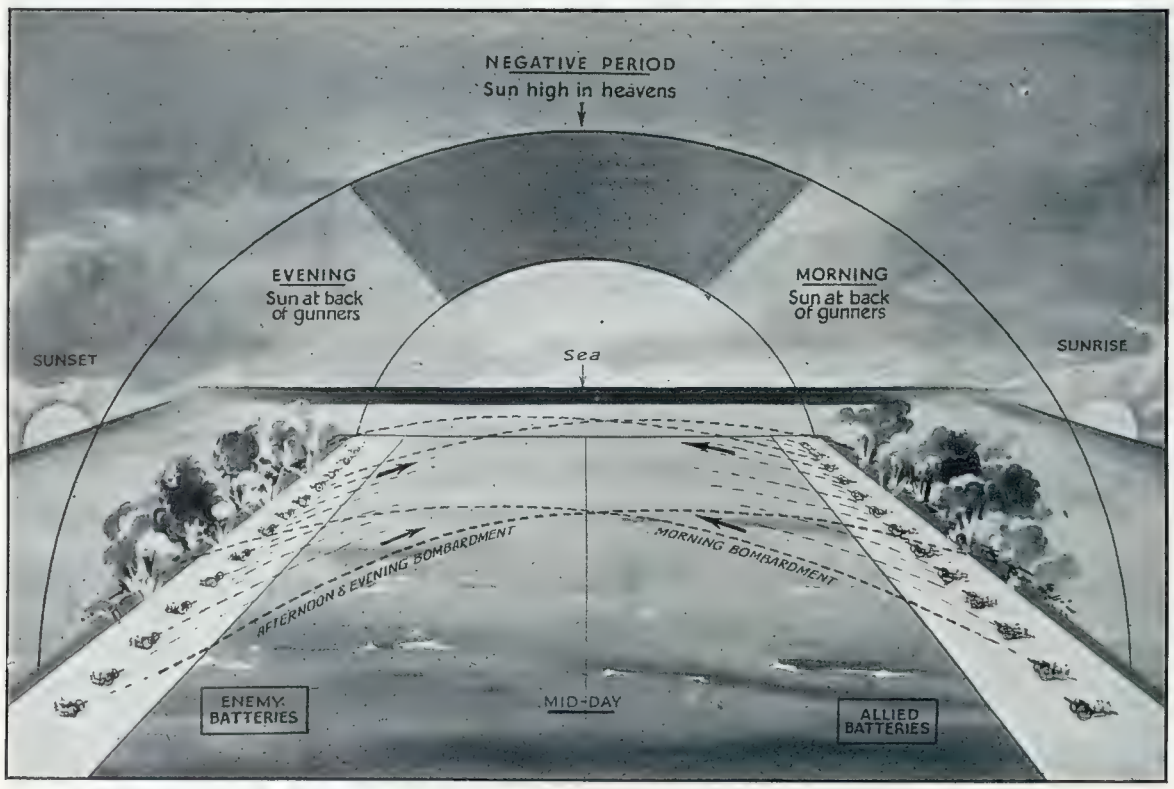
Above all, artillery, and particularly the type at our disposal, is at a great disadvantage under modern conditions. Advanced military thinkers agree that it can be a positive handicap on the battlefield unless made mobile to a degree so far unknown in the British Army. The German ordnance that has played such an important part on the Russian front has been given the mobility of tanks by mounting on self-propelled tractors. It has been so designed that the pieces can be fired at great speed without the usual lengthy pause for laying and loading. But our men have been equipped with weapons that fundamentally date from the last war in that they are brought forward behind tractors or lorries with the barrels pointed the wrong way, and they cannot be fired till slewed round, set up, and carefully laid. Their separate caissons or ammunition carriers can be delayed or destroyed. Few of them fire as quickly as the German best.

That was the initial handicap. It was aggravated, however, and is still handicapped, by several other controlling factors, some of them unique to desert conditions and real freaks of artillery science. Thus weather, and particularly solar circumstances of the El Alamein region, have greatly hampered the gunners. The sun rises each morning to the south-east, or their rear, after which it travels in an arc round to their left flank, in the south, and so, by afternoon, to the south-west and their front, continuing to face them till evening. The effect is, of course, to restrict really accurate bombardments of the German positions to the morning. But the afternoon does not bring only this dazzling sun-glare in the eyes of the gunners. It also brings, very often, a fiery wind which drives the dust before it in blinding clouds. The enemy can at once manœuvre his tanks under cover of the tawny dust-curtain, while our gunners find it difficult to observe their movements and to bring down their fire on them. It is true, of course, that the enemy gunners are handicapped even more than ours, because they are dazzled by the south-easterly sun in the otherwise clear mornings, and are involved in the dust-storms when the afternoon sun is in their favour. But the enemy's guns are not so important to him as are those of the Royal Regiment to Egypt's backs-to-the-wall defenders. He specialises, moreover, in anti-tank ordnance of one kind and another which operates at short ranges and does not require such scientific laying as our larger pieces.

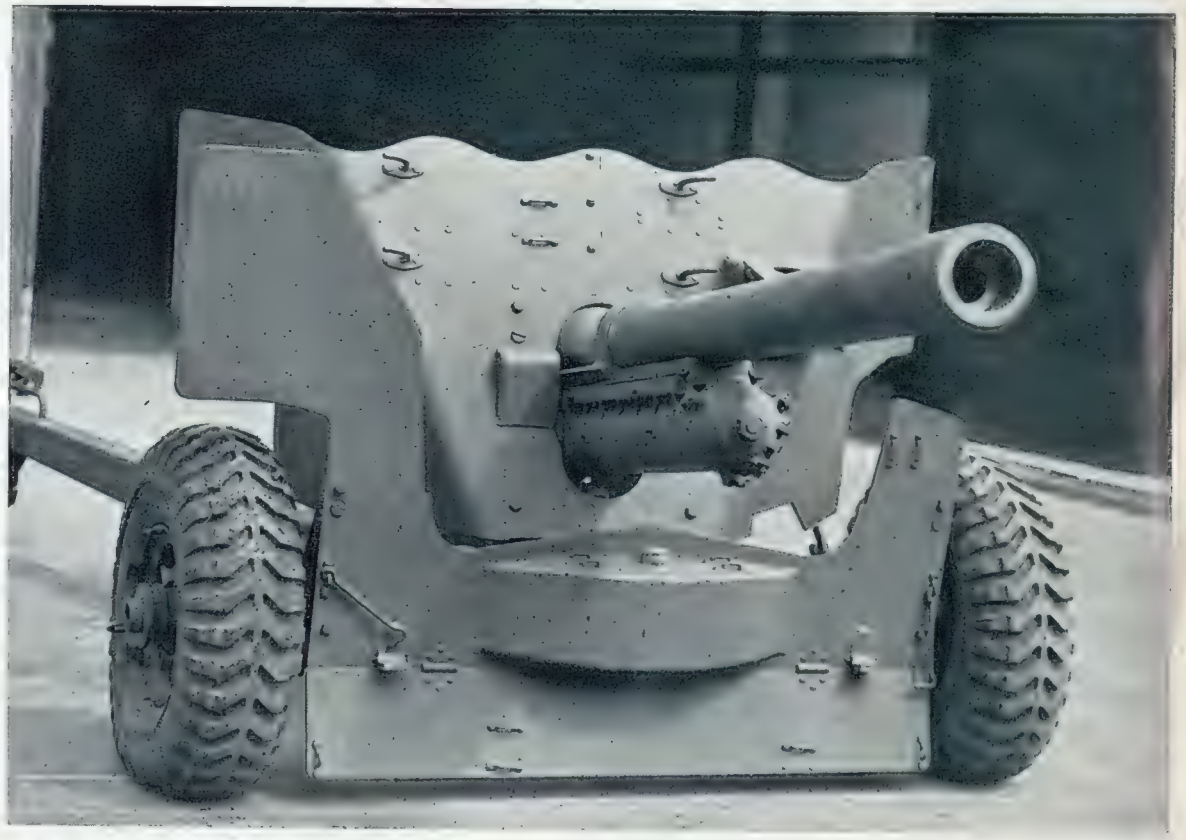
It is true that British artillery has seldom done so much point-blank work as in the recent desert. Devastating bombardments over "open" sights have been a feature of the fighting. But the bulk of the firing is still at ranges of roughly 10,000 yards, with occasional exciting little engagements conducted at between 2,000 and 4,000 yards range. Now, accuracy at such distances with fine modern pieces such as the 25-pounder and with reliable modern ammunition should not be difficult to obtain under normal conditions. Unfortunately, those of the desert are abnormal to a degree. Observations posts are often horribly exposed and cannot be pushed forward too far or they would be obliterated.

Then the data supplied by such posts and by aircraft, and by the guns' own instruments, tend frequently to be erroneous by just that infinitesimal shade which makes for wide inaccuracy of aim. This is due to the peculiar atmospheric conditions of the desert, highly productive of optical illusion, and of literal dust in the eye. Yet another disability is the frequent desert lack of landmarks, or objects on which guns that fire against invisible targets can be sighted. When shelling targets in the remote distance, artillerymen choose such an intermediate object—a tree or a house—for

A "SHOOT" BY 25-POUNDERS AT EL ALAMEIN: The Gun Position Officer and his assistant calculating the range and direction of the enemy target. When this picture was taken, the guns were engaged on "Link Shooting"—that is, the different troops engaged were firing in conjunction with each other



DISABILITIES OF GUNNERY IN EGYPT: The battle-line runs from north to south; therefore the gunners on the British side have the sun behind them in the morning and the Germans have the sun behind them in the afternoon. Each side has thus to discharge its daily "hate" at the appropriate time of day!



THE NEW 6-POUNDER ANTI-TANK GUN, now being produced in quantity: The influence of the anti-tank gun in modern warfare made itself felt most markedly during the fighting around Knightsbridge in the Libyan Desert and, later, in Egypt. In the opinion of many we were out-gunned by the Germans in this respect, and this is held to be the cause of our rapid retirement to the Alamein line. Whatever our deficiencies in this respect in the past, our Royal Ordnance factories are fast repairing them now; in one factory, built entirely since the start of the present war, large numbers of the 6-pounder guns are now being turned out. The anti-tank gun, of which a finished specimen is shown here, is mobile, has a high rate of fire and possesses remarkable qualities of armour penetration. A large proportion of the workers employed on its manufacture are women

WARFARE BY THE R.A.F. AGAINST ROMMEL'S COASTWISE SUPPLY LINES ALONG THE NORTH AFRICAN COAST : Blenheim bombers attacking the big lighters which the Axis are using in considerable numbers for reinforcements and supplies—*Drawing by Roland Davies*

We have already drawn the attention of readers to the new type of craft used by the Axis off the Egyptian coast. In a recently-published report on the campaign, Mr. Alexander Clifford has stated that "the Germans and Italians are using well-armed lighters with plenty of anti-aircraft protection and carrying 120 tons of material. They slink along the coast, travelling by night as much as possible, and put in at little places like Sollum, Sidi Barrani, Mersa Matruh, where there are only rudimentary port facilities." In the event of a successful attack by the R.A.F., the size of the lighters means a big loss to the Axis ; but a good, uneventful trip means a big gain. The Germans are carrying a lot of petrol like this—and, if report be true, a lot of reinforcements. When troops are being carried they are battened down in the capacious holds : if the ship is hit the losses to personnel must be catastrophic

the first sighting, after which the necessary deviation corrections are made. But in the featureless desert there is frequently nothing.

Yet a further difficulty is provided by the heat and dust. Barrels require cleaning and even relining much more frequently when the temperature is high and the gun sucks in so much sand after each round. It is hard to keep the weapon in that spotless state without which sustained accuracy is impossible. The old saying that a second round never falls in exactly the same spot as the preceding one applies especially under these rough conditions. It is only when every process of gunnery is perfect that a second round ever does hit the same spot, but in Egypt our men have to wrestle with imperfections everywhere ; and that they do attain their remarkable results is high testimony to their ceaseless care.

Nor should one overlook the work of the ammunition numbers, indeed of the whole ammunition supply organisation right back to Cairo and beyond. When Rommel was first repulsed, his propagandists expressed the wishful opinion that the British were using so many shells that soon the remaining dumps in Egypt would be empty. That has not transpired yet, and will not. It was the speed and efficiency of the ammunition numbers of our field-batteries which enabled that immense barrage to be maintained. Often cordite charges were set afire in the limbers and there was constant danger of the vehicles blowing up. The men continued to work, running across open ground with the shells to the guns until it was the Germans who called it a day.

Captured Germans confirmed afterwards that our artillery had been the deciding factor. "I am told that your troops do not like the Stuka," one young German said. "Well, we feel the same way about the 25-pounder." His comrades had called it the "Zigeuner (gypsy) gun," because, like a gypsy, it was always appearing in different places.

THE ITALIANS HAVE DECLARED THAT THIS IS A BRITISH SHIP which they bombed in Tobruk Harbour before its capture by the Axis after our withdrawal

The vessel is obviously a large liner, used for the conveyance of either troops or war material, or both. When this picture was taken, the vessel had suffered considerable damage as a result of shell-fire and bombing, and it was surrounded by a number of other ships of smaller tonnage also in a sinking or badly-damaged condition. In a recent report from the Middle East, however, mention has been made of bombing operations carried out by ourselves and by U.S. aircraft, during the course of which hits have been made on "a 10,000-ton enemy merchant vessel which was moving in the centre of the harbour" : this would seem to indicate that—whatever its nationality—the enemy are trying to make use of this largish vessel for their own present purposes

WHAT HAPPENS WHEN A BRITISH PARTY GOES OUT ON PATROL IN THE DESERT: A raid on a string of advanced posts pushed out by the enemy towards our line in the vicinity of the Ruweisat Ridge—*Drawing by E. Byatt*

"Night patrols serve a double purpose," a war correspondent in Egypt writes. "Reconnaissance is the primary aim, but they also have the effect of continually harassing the enemy. Armed as a rule mainly with tommy-guns and hand-grenades, our men penetrate silently into the enemy's lines, obtain the requisite information, and frequently 'beat up' a post on their way back. It is particularly tricky just now, as the enemy is showing a tendency to shift his advanced positions with almost bewildering rapidity." On one recent raid, a soldier entered a dug-out which he had previously found deserted for several nights in succession. As he stepped in this time he saw that a party of half-a-dozen Germans were gathered there. Getting out quickly, he threw in a hand-grenade. He was not pursued. Other patrols, penetrating the enemy's positions on "Ruin Ridge," have discovered that the Germans are still digging in and protecting their main strong-points with triple lines of wire. Altogether, recent enemy movements in this northern sector confirm the impression that for the moment, at any rate, his role is defensive

THE CAMPAIGN IN EGYPT *(continued)*

"OUR PATROLS WERE AGAIN ACTIVE . . ."

The Facts Behind the Cairo Communiqués—The Timing, Purpose, Size, Clothing and Arms of Our Desert "Commandos"

Described by DONALD COWIE

TOO little is known about our patrol parties in the Western Desert. Represented, for obvious security reasons, by only bare, single-sentence announcements in the Cairo *communiqués*, their work is nevertheless of prime importance, often highly dangerous and always intensely interesting. First, then, what is its purpose?

That can be answered simply. The purpose of patrolling is to keep in touch with the enemy. It is *preliminary* work in the strict sense of the term, leading to some new development in the local situation—preparing for an offensive or making ready for defence. More minutely, however, it covers many activities, from large-scale offensive raids on enemy positions to brief, miniature forays for the purpose of obtaining talkative prisoners. A party may go out to destroy an ammunition dump or bring in a damaged tank. But probing is the main idea, constant, tireless probing, so that every yard of "no man's land" is eventually known.

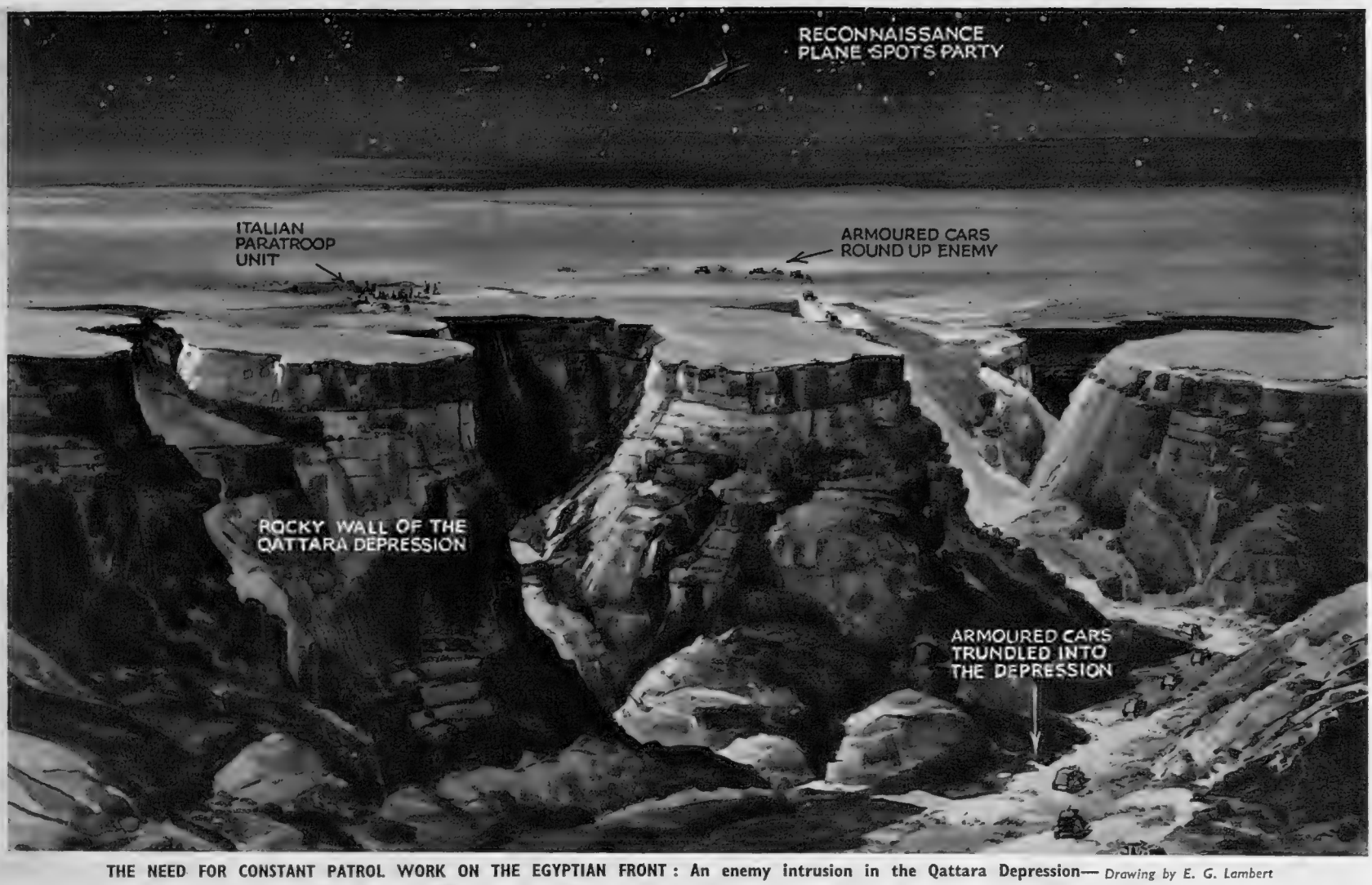
How many men, then, are needed for the average patrol? The *average* patrol. . . . It is difficult to dogmatise. So much depends on the purpose of the foray, on local conditions and on the available organisation. But, taking the case of the smaller, pin-pricking patrols which constantly operate whatever the conditions, perhaps a sergeant might take six other ranks. On the other hand, a whole platoon might operate, with an officer or officers in charge, possibly with the company commander himself taking an outing. Armoured-car patrols generally go in platoons, several vehicles in a spaced-out line. At the other extreme is the case of the one-man patrol, such as that conducted by the famous Intelligence officer of General Maitland Wilson's staff, who, out one night in a car alone, found the space between the Italian perimeter forts of Sidi Barrani through which our tanks later swept to encircling victory.

Their clothing? Well, this is often the usual tropical kit of everyday wear, supplemented by scarves and even by greatcoats to keep out the nip of cold desert night, but there is a special rig-out for the purpose. This consists of rubber-soled boots and what are known as "crawl-suits"—khaki overalls which make the wearer practically invisible against the dark sands. And weapons? This depends again on circumstances, and, indeed, on the availability of tommy-guns—undoubtedly the most popular weapon with patrols. Generally the parties have mixed armament: two or three tommy-guns and the rest rifles and bayonets (carbines the most handy type), together with Mills bombs or grenades, ever the stand-by of those who hurriedly visit the enemy by night. The rifle itself is the clumsiest, most ineffective weapon. Coming across an enemy post in the dark, a patroller could empty the magazine of his rifle without scoring a hit, whereas a few bursts from a tommy-gun would rarely fail to strike something, and a deftly-lobbed grenade might settle the entire post in a moment. The bayonet does, however, prove most valuable in any close-quarters charge, so the rifle is taken along. A Bren gun, if it can be carried, provides the deadliest armament of all.

Consider a typical patrol of the Western Desert, conducted the other day by Australians (famous for their patrolling skill in the last war and this). The purpose of their foray was tersely stated by their commander afterwards. They "went out looking for trouble," and got it when they came upon a German working-party over twenty strong. (Evidently the Australians were about half that strength.) They reached to within a few yards of the industrious enemy before revealing themselves; their crouching, padding technique and their camouflage were so perfect in the gloom that the Germans were quite oblivious until the patrol leader stepped forward and flung a hand-grenade into their midst.

That was the pre-arranged signal for the other patrollers to fire, and forthwith four Australian tommy-guns and a Bren gun blazed across the darkness into the smoking pit made by the little bomb. It was point-blank range, and the Germans, said the Diggers afterwards, "went down like scythed wheat." At least twenty were shot and one was taken prisoner back to the British lines for a most valuable interrogation by Intelligence officers.

AN AMERICAN R.A.F. PILOT DROPS IN FOR LUNCH on a desert battlefield: Pilot Officer D. J. Hall, with a New Zealand Brigadier *(See notes on right)*



THE NEED FOR CONSTANT PATROL WORK ON THE EGYPTIAN FRONT: An enemy intrusion in the Qattara Depression— *Drawing by E. G. Lambert*

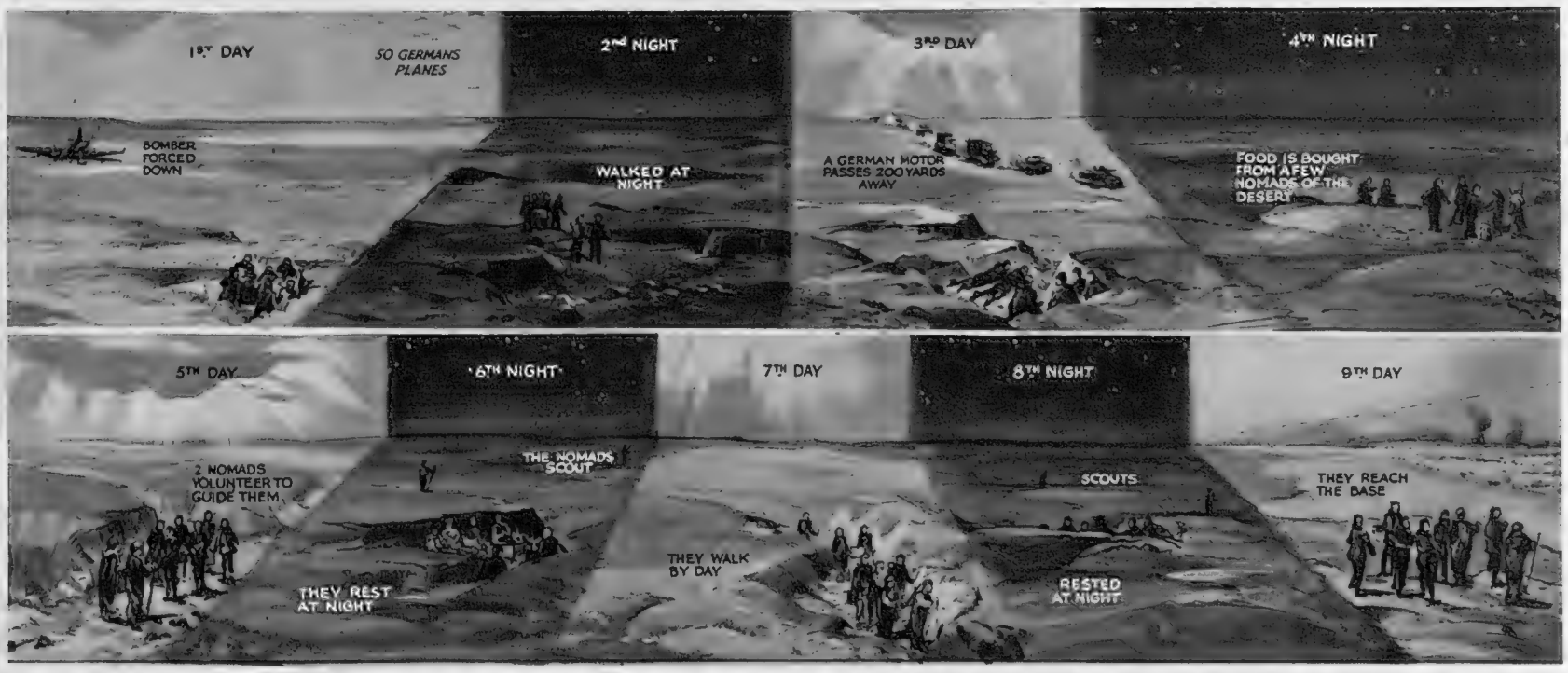
Recently, one of our reconnaissance planes, flying above the cliffs of the Depression, noticed a small group of black objects which roused suspicions. The circumstances were communicated back to headquarters, and in the evening an armoured-car patrol was despatched to the area indicated and succeeded in rounding up a post which had advanced very close to the actual edge of the plateau. The party proved to be made up of Cacciatori—Italian parachutists who are known to be serving as infantry in the southern sector

Timing of the patrols? They take place at night as a rule, and generally last no longer than a couple of hours, though again particular circumstances might demand a much longer stay, or even a shorter one. Some patrols, moreover, set out at the first hint of dawn, aiming to get back before it is properly light, thus obtaining the advantage not only of some light on the subject, but also of real surprise, for the enemy, and particularly the Italian, is apt to be most bemused at that unpleasant hour. The Italians have even installed alarm bells to warn them, as the Australians discovered the other day when they captured the following order from an Italian battalion commander: "Division has rung up to say units in front of you are Australians—notable patrollers. Keep your eyes open. Don't withdraw your patrols over 100 metres from the strong-point or you will find yourself left high and dry with only alarm-bell protection."

However, once again there is no hard and fast rule as to patrol timing, and there are, in fact, many daytime patrols, especially those conducted by our armoured cars, whose work has never received the recognition it deserves. They set off into the open desert far south of the enemy positions, and execute a wide detour that they may search the country for any signs of enemy attempts to proceed by that route and outflank our main line. They may travel 75 miles across the rubble and the bumps, possibly suffering attacks by cannon-firing Messerschmitts, or being forced to beat a swift retreat, 60 miles an hour across the hummocks and thorn-bushes, with German tanks in pursuit. But usually they get what they want.

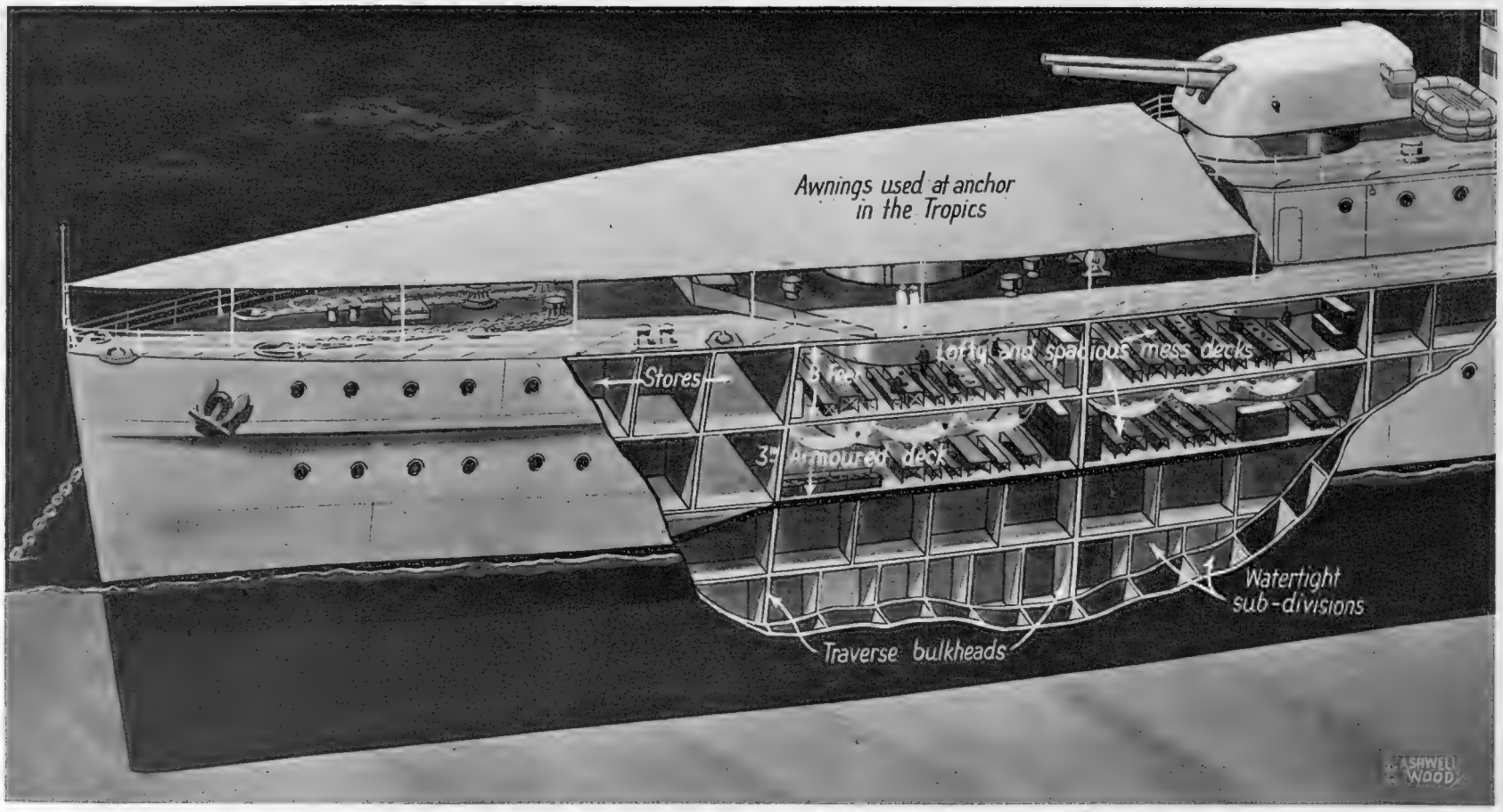
When informed of near-by danger, these cars get up to all sorts of camouflaging dodges. A favourite one is to get the cars among a herd of camels, whose dust alone is sufficient to conceal them.

Indeed, these men who go on patrol have little that is pleasant in their existence. There may be a thrill at the dawn return with the consciousness of a good job done and blankets at last—breakfast!—but it is difficult to sleep anywhere, let alone in the desert among continual activity.



A FEATURE OF THE DESERT FIGHTING IS THE WAY IN WHICH BRITISH AIRMEN ESCAPE FROM BEHIND THE ENEMY LINES: The record of a nine-day trek by the crew of a Wellington bomber after they had been forced down sixty miles behind the battle line—*Drawing by E. G. Lambert*

A very noticeable feature of the Egyptian campaign has been the manner in which airmen and soldiers have found their way back to the British lines after weeks—and sometimes months—of wandering in enemy-held territory. The drawing above records one such exploit, by the crew of six from a Wellington bomber which was forced down some 60 miles behind the German lines on July 15. "Nine days in the desert for £9," was their humorous summing-up of the adventure. On the first day, with four of them carrying the plane's ten-gallon water-tank, they walked till the sun became too hot, being passed by a formation of over fifty German aircraft which took off from a landing-ground near by. After this they rested by day and walked by night. They bought food from the few nomad people of the desert whom they met. Once German armoured cars passed within 200 yards of them. On the fifth day they met two nomads, who volunteered to guide them through. In the next four days they walked more than 100 miles to our lines. Each night the nomads scouted around for the Germans, and plotted their way through safely by day. The photograph *on the left*, showing Pilot Officer D. J. Hall (an American serving with the R.A.F.), was taken shortly after he had baled out of an aircraft at 11,000 ft. after the rudder controls had been shot away. As he landed, he was met by a New Zealand Staff Officer, who presented the Brigadier's compliments and invited him to lunch in the open air



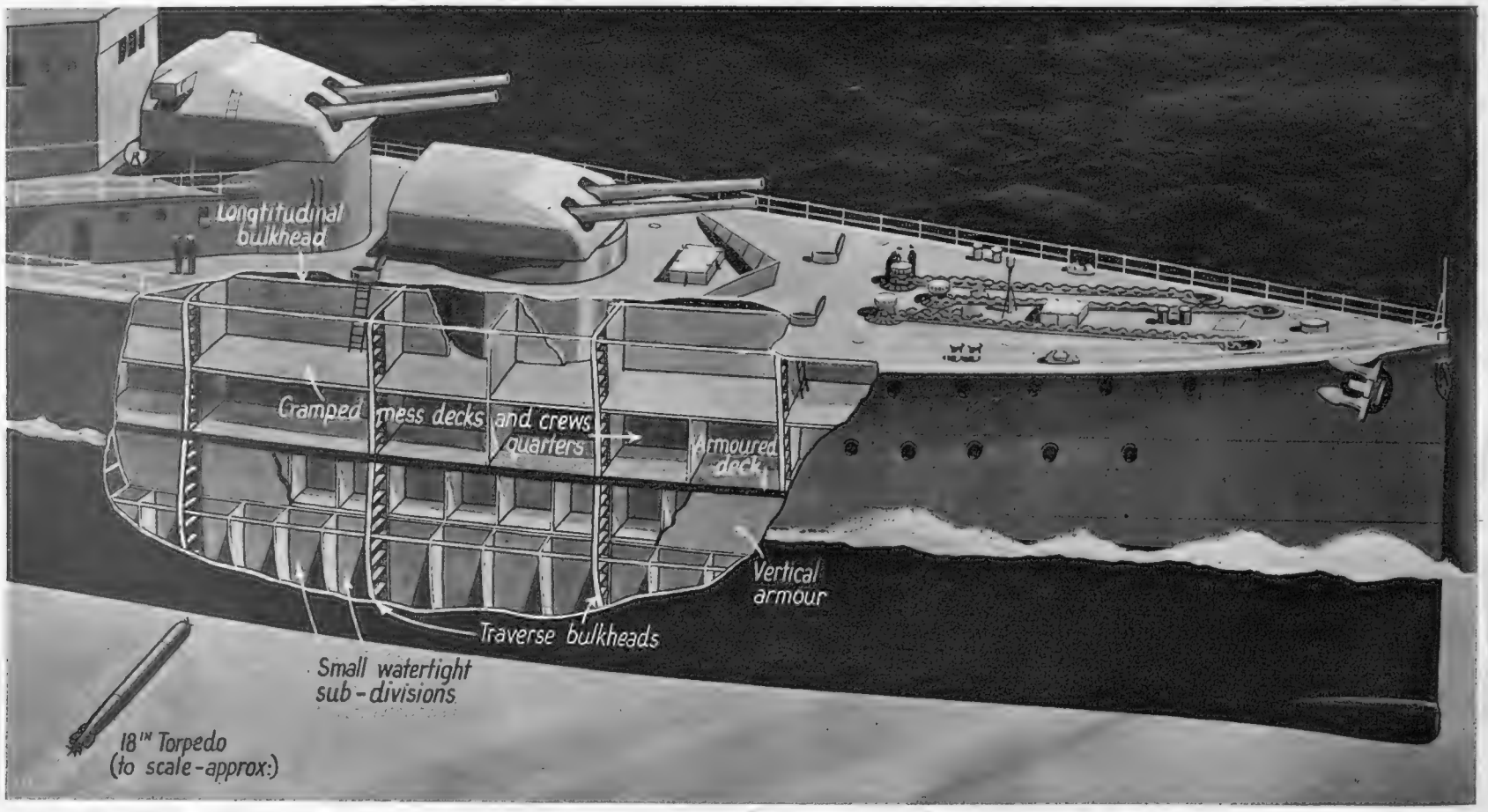
THE BRITISH KENT CLASS OF CRUISER, which has the same armament and tonnage as the German Prinz Eugen (below); although these vessels have no side armour, this is compensated to some extent by a 3-in. armoured deck

BRITISH AND GERMAN CRUISER DESIGN COMPARED

Showing the Comparative Vulnerability of the Two Types of Warships

—Two special drawings by L. Ashwell Wood

In view of recent naval operations (in the course of which British cruisers have been hit and, eventually, lost), a comparison between the two types of British and German vessels will demonstrate some of the different conceptions in the design of these "all-purpose" warships. The vessel depicted above is a Kent class cruiser of 10,000 tons—possessed of the same armament and tonnage as the German *Prinz Eugen* (which is illustrated below). These cruisers have very good sub-divisional protection below the water-line, but some of this type have no side armour. To some extent, this is compensated by a 3-in. armoured deck. Unlike the German type, mess-decks and crews' quarters are extremely comfortable and spacious: the high freeboard of the class gives a 'tween-deck height of 8 ft. They are superior in sea-going qualities, and their range of 10,400 miles (at an "economical speed" of 11 to 14 knots, as against their "flat-out" speed of 31½ knots when they would only be capable of 2,300 miles) enables them to operate all over the globe—which the British Navy has to do in peacetime as in wartime. The latter is the reason why the British naval designer has to consider the problems of adequate protection, range, living conditions and speed. It is interesting to note that in *Jane's Fighting Ships*, the great authority on the navies of the world, the following comment appears in connection with these British cruisers: "Although on paper these ships appear to be inferior to foreign Treaty cruisers, in practice they are superior in sea-going qualities and have accommodation and habitability which is not equalled by any other cruisers. . . . No attempt has been made to attain high speeds . . . the ideal aimed at being the ability to sustain the designed speed indefinitely and in all weathers. . . ."



THE GERMAN PRINZ EUGEN CLASS OF CRUISER, showing the extensive bulkheads and sub-divisions, of which the German Navy is very fond. This makes the living compartments very cramped and very crowded, especially during long cruises

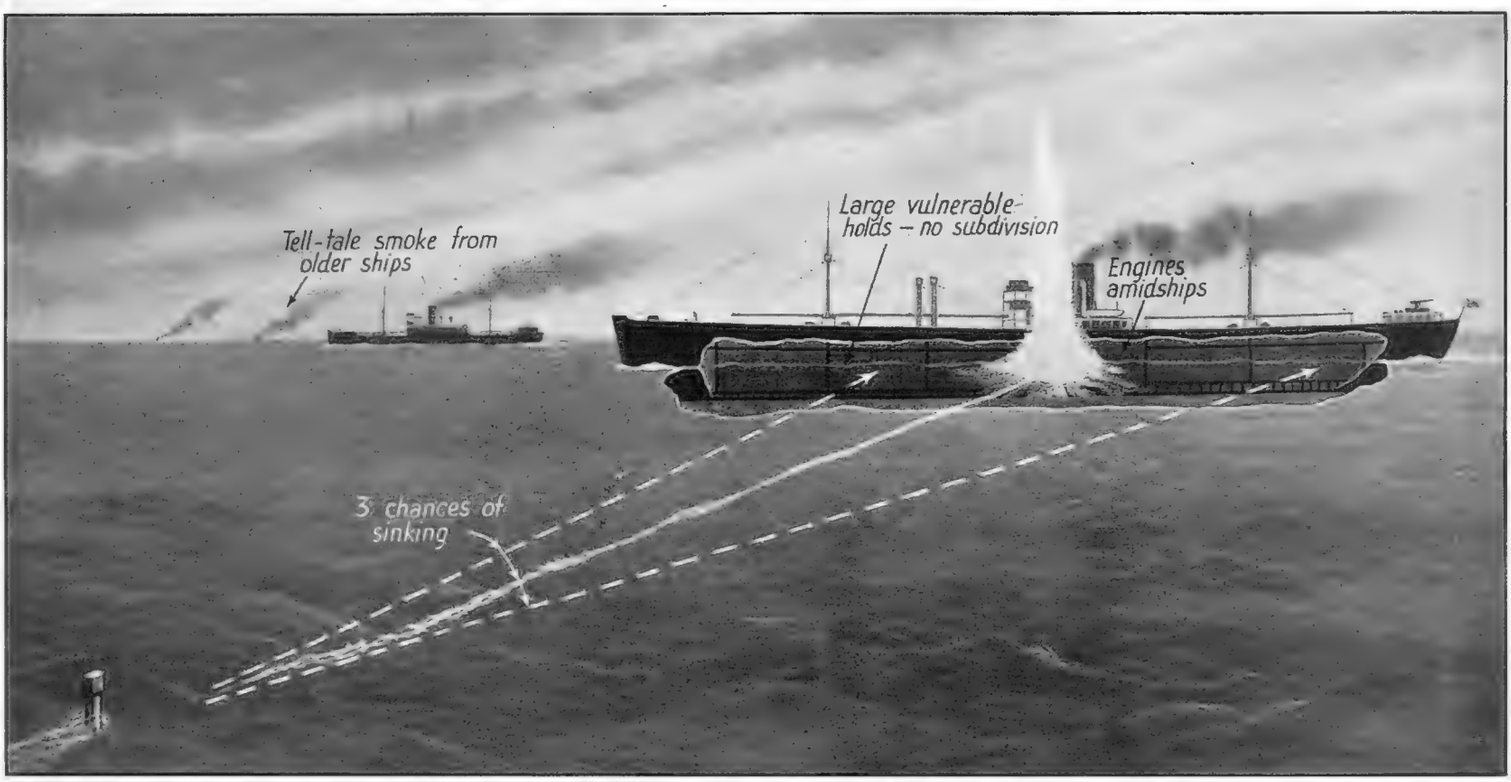
The extensive bulkheads and sub-divisions of German warships, carried upwards through the mess-decks and other quarters, make these compartments very cramped: to live in them for any length of time must be trying for the crew. (It has, more than once, been pointed out that the lack of better amenities on German vessels during the last war was a contributory factor to the revolt amongst the Navy which hastened the collapse of 1918!) Most German ships—say, of the Prinz Eugen class (as above)—have a limited range compared with the British Kent class shown in the upper drawing: the German vessels were not designed to operate all over the world, as Germany has few colonies to protect in far-off waters. Extra weight and space in these vessels is also taken up by the vertical armour, which extends well forward. All the traverse bulkheads are "intact"—that is, there are no openings in them below the water-line, a factor which does improve the interior communications of the vessel. Torpedo damage is localised throughout by the numerous watertight compartments. The Prinz Eugen class consists of four vessels, the other three being the *Admiral Hipper*, *Seydlitz* and *Lutzow*. All are of 10,000 tons and carry eight 8-in. guns: they carry four aircraft aboard, and have a complement of 830. "Jane" makes the following pungent criticism—"Internal arrangements of these ships reported to be decidedly cramped and badly ventilated"

WHAT HAPPENS WHEN A TANKER IS MINED: This large American vessel was hit off the East coast: it buckled just aft of the bridge whilst in tow. Note the rent in the side of the vessel where it cracked open

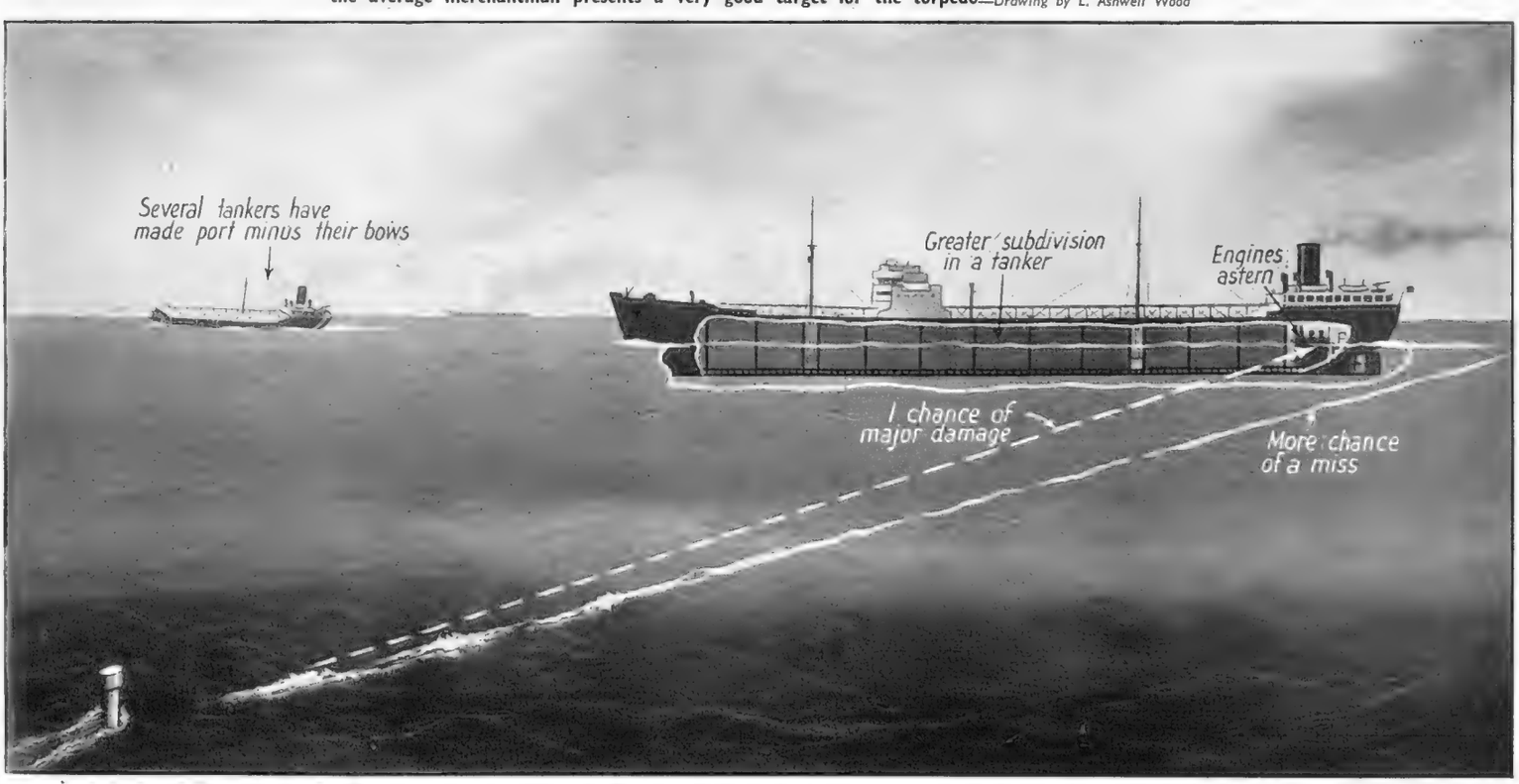
CAN MERCHANTMEN DESIGN BE IMPROVED?

The Construction of the Tanker and the Freighter Compared

A considerable number of suggestions have been made from time to time concerning methods to circumvent torpedo attack on merchantmen. Many of the suggestions—such as giant submarines, or vessels lying so low in the water as to be almost awash, and others—are not immediately practical: but here is one very useful suggestion which does seem to have many virtues—the placing of the engine-room at the stern of the vessel instead of amidships. The ordinary cargo-boat is very vulnerable to torpedo attack: its holds are large, and there is, naturally, very little subdivision owing to cargo needs; the engine-room, being amidships, also offers a good target. The whole ship is a "square box" structure, standing well out of the water: its outer shell plating is generally only half an inch thick, and thus affords practically no protection against torpedo or shell. Moreover, a ship of 400 ft. length usually has only seven watertight bulkheads; a ship of 470 ft. would have eight; and a ship over 590 ft. would have nine. The submarine commander has three chances of sinking such a vessel, as indicated in the drawing below: he can aim either for the large, vulnerable holds, or for the engine-room amidships. In the case of a tanker, however (see the drawing reproduced below), or ships with their engines built in the stern, there is a better chance of survival (apart, of course, from the explosion of the tanker's more inflammable cargo). Greater subdivision enables such vessels to remain afloat: their tanks, being oil-tight, are also watertight. A submarine, aiming at the engines of a ship, stands a good chance of missing, especially if the ship is a fast one, when the engine-room is astern. Several tankers have reached port after a torpedo hit amidships; in some cases, it has been possible to have new bows "grafted" on them by expert "ships' surgeons," and they have then become seaworthy again.



THE ORDINARY TYPE OF CARGO VESSEL IS VERY VULNERABLE TO TORPEDO ATTACK: With its engines amidships, and large vulnerable holds at both ends of the ship, the average merchantman presents a very good target for the torpedo—*Drawing by L. Ashwell Wood*



A TANKER OR SHIPS WITH ENGINES ASTERN DO STAND A BETTER CHANCE OF SURVIVAL WHEN UNDER ATTACK BY TORPEDO. Several of these vessels have reached port after a hit amidships, and have subsequently been repaired. A submarine, aiming at the engines of a ship when these are at the stern, stands a good chance of missing, especially if the ship is a fast one—*Drawing by L. Ashwell Wood*

AWAY FROM THESE WARS. . . .

Memories and Thoughts of the Years Between

—A Fortnightly Causerie **By J. G.**

SPORT IN THE POST-WAR WORLD.—My heart warmed and my hands responded to a recent appeal by the Duke of Beaufort and Lord Middleton for books on sport to be sent out to prisoners of war. I have for some time been dispersing a small collection of books on sporting subjects, mostly on shooting. Yet the wording of the appeal raised some doubts in my mind. It seemed to me that the books sent out would provide solace and recreation (which is the essential thing) rather as golden memories of days which will not return in our time than as refresher courses for the science and technique of sports to be practised again after the war. We see the future through a glass darkly, it is true. We know not even vaguely how long the war will last, strong as our faith in ultimate victory is. But, be it long or short, I myself cannot visualise in the first years of peace an England so constituted and conditioned as to make possible any return to the major sports of Privilege. My own eye-of-faith is regretfully blind to any vision of the Pytchley field strung out and stretched across the ridge and furrow of the Shires, or of strings of expensive hunters "eating their heads off" in the loose-boxes of Melton. I cannot see a smocked army of beaters, scientifically led and disciplined, showing hundreds of reared pheasants "as high as ever you saw them" over the fir belts of Newmarket. The new order of agricultural England and the post-war taxation—not to add the new democratic order called into being by the war, must put a period to such visions in my time at least.

"Read the names, look at the faces, note the clothes of the men and women in those groups of Edwardian and Georgian shooting parties. . . ." This picture comes from *Seventy Years Young*, by Elizabeth Countess of Fingall: it was taken at Elveden in December 1902. In the back row, from left to right, are—the Duke of Roxburghe, the Marquis de Soveral, the Duke of Montrose, Lady Iveagh, the King of Portugal, Lady Mary Grosvenor, Lord Suffield, Lord Savile, Sir Arthur Davidson and Count d'Arnoso. In the middle, seated, are—Lady Evelyn Guinness, Lady Lilian Wemyss, the Countess of Fingall, the Duchess of Montrose, Lady Helen Vincent and Mrs. Hope Vere. In front are—Rupert Guinness, Admiral Capello, Lord Iveagh, Seymour Fortescue and Commandant Pinto Basto

The Post-war Model.—I believe that sport will survive our present trials, for sport is ingrained in the character of our race. But I am as firmly convinced that a new order of democracy and a long-sustained austerity must govern and restrict it. The forests must be converted, where conveniently situated, into national parks, and owners or tenants of moors must bow to hikers and ramblers. The English sportsmen, too, must listen to the voice of the farmer, and that voice (it cannot be expected) will not always excuse trampled roots or broken fences or despoiled hen-roosts.

The sport of post-war England will be far more widely and far more informally pursued. As in our social life generally, so in our sports in particular we shall be back to Jane Austen, if not to the England of the first Georges. We shall be back to the "pre-battue" era of shooting, and the pre-Mytton era of hunting. I have tasted some of the sweets and cream of the "great days" of shooting. The savour and the memories remain. But they do not induce me to take a pessimist's view. I am not so sure that, in sport, as in everything else, plain fare is not to be preferred to a diet of *marrons glacés*. There were ugly features in Privileged Sport, a deal of jealousy and snobbery, selfishness and commercialism. A maraud with a friend is a sweeter memory than a competitive killing, and those who have shot longest, best realise that company and fellowship mean more than big bags, and that the humours and chances of a successful scratch day are the high lights of a sportsman's recollections, while the "records" are only remembered in terms of headache and disillusionment.

Our young men in the prison camps of Europe must read these old books on sport as historians read history—for the lessons which it teaches and the pitfalls against which it warns them. These were the habits of an England dead and gone. Censure them with understanding, but mark them with discernment. Only a fool despises his ancestors or vaunts the superior wisdom and culture of his own generation. Good or bad; what has been has been—and is written for our learning or for a warning. What's to come is still unsure. It is yours to give it a happy and graceful shape.

HARVESTING NEAR DOVER: In spite of enemy air activity and shelling in the neighbourhood, farmers on the cliffs near Dover have carried on with their work without a break. Here wheat-cutting is seen in progress on the cliffs above the Channel

Even in the Highlands of Britain which elude the plough, I conceive that the "great days" of sport are henceforth memories only.

The grouse no doubt will resume one day their cycles of bumper years, but killing them, as they must be killed if disease is to be averted, is not only an elaborate, but a very expensive business. A big moor in a bumper year might very well require for its welfare the killing of 8,000 brace of grouse, and that figure could not be attained (with the luck of the weather and with the most active guns) at a cost of less than £8,000. The bulk of it must be done before September is over—often a wet month—and it cannot be done by mere energy. Unfortunately, the essential accuracy of aim is a matter of practice, and too often efficiency comes when energy declines. And ponies add to the cost of running a moor, hiring scores of beaters, transporting them to and fro, and victualling and renting a lodge.

Privileged Sport.—Deerstalking had already declined in favour before the present war. It was no longer in tune with the mentality of 'tween-wars youth. The deer will survive, but I doubt whether the rents of forests will soon again become a sure source of income to Highland landowners. These old books on sport must, I think, be read as ancient history. They are essentially social history of an age of Privilege. Privilege cries out from every page, every chapter, every illustration. Above all, from every illustration. Read the names, look at the faces, note the clothes of the men and women in those groups of Edwardian and Georgian shooting parties; ponder over the uniforms of those armies of well-trained beaters in their coroneted smocks. Glance at the Lynwood Palmer or the Munnings pictures of the nineteenth Earl, M.F.H., mounted on Backgammon (by Bacchus out of Ganymede), and you will, if you are wise, resolve to cut the coat of your dreams and hopes of future sport to the shape of things to come.

The Gods of the Great Days.—The heroes of the great days were certainly spoiled darlings of fortune; as certainly they were spoilers of the pleasure of others. These sportsmen's gods had feet of clay. They were the little Hitlers of their day. Even George Payne, a kindly, humorous man, had more of bitter regret than of glory in his memories. Besides three fortunes, he wasted considerable natural talent, better employed in *some* service to his country, and his laughter in the billiard rooms of the London Clubs had always an echo that was grim. Chaplin spent some of his natural talent in his country's service. He lived to regret that he had not allocated a still higher share, for he died a pensioner. I still retain a youthful memory of Lord Ripon, sulking gloomily, his back against a tree, in the middle of a big pheasant stand because he was out of form and a rival was bringing down more birds than he. I recall one or two pheasant shoots in the years between wars when the slaughter of tame birds, flushed no higher than soup-plates, sickened the guns by luncheon time. Some of the famous Masters of Hounds, enshrined in history, were nothing but foul-mouthed, barging ruffians and tyrants of their "little fields." It was their pleasure and privilege to make life hideous for the stranger or the neophyte. And their worshippers carried on the work. What youth who in Edwardian days attended a Hunt ball in a strange country in the Shires but recalls with a shudder the cold-shouldering he received from the local élite, the unwelcoming and exclusive coteries, the privileged, g-clipping vernacular of those brick-faced, stony-hearted hunting women and their menfolk in pink and the right buttons?

And, oh! those memories of the unnecessary and wasteful trappings of sport, the clothes, the meals, the servants, the cigars. . . .

I think the verdict of the prison camps delivered after a reading of those old books on the Sport of Privilege will be unanimous: *Guilty but insane*. At the best of it, it will be admitted that the "great days" had neither a graceful nor a happy shape and that the new order must be shorn of a deal of selfishness and show and snobbery, of waste and jealousy. None knows better than the Poet Laureate the best, and the worst, which the Sport of Kings in the Shires can produce.

The Shaftesbury Homes and "Arethusa" Training Ship

Another instance of how well old boys and girls make good use of the opportunities given them in the Homes has just been made known. One old boy who went through three of the Homes is now a traffic manager in a branch of the Pan-American Airways. Please send a gift to this great work for children. Address: 164, Shaftesbury Avenue, London, W.C.2.

1. THE "TANK FARM" AT GIEN BEFORE THE ATTACK BY THE R.A.F.: A vertical photograph, taken from directly above. Note the great number of vehicles drawn up in orderly rows and apparently ready for dispatch

A GERMAN "TANK FARM"

Before and After its Bombing by the R.A.F. in Occupied France

—Official Air Ministry Photographs

Recently Bomber Command of the R.A.F. carried out an attack on a "tank farm" at Gien, in Occupied France. Photographic reconnaissance has now furnished an excellent example of the accuracy of British bombing of military objectives situated close to residential areas.

Gien is approximately 80 miles south of Paris and, in the absence of any particular landmark, it is difficult to find. Nevertheless, the small force of bombers detailed for the attack succeeded in locating and accurately bombing the target.

The reconnaissance photographs reveal damage to the "farm" out of all proportion to the small number of aircraft employed. The results are clearly indicated in the sharp photograph reproduced *below*.

Before the fall of France, the "tank farm" at Gien was used as a French Ordnance factory, to fit out tanks with their operational equipment—gun turrets, wireless apparatus, etc.—after they had been manufactured in other factories. It has been taken over by the Germans, and several thousand tanks have already left there for various fronts. As the work is done entirely by German technicians, the only casualties in this attack should have been Germans, as *no bombs fell outside the target area*, which adjoins a considerable residential district.

AN OBLIQUE PHOTOGRAPH OF THE WORKS AT GIEN, showing the layout of sheds and workshops

The following is a key to the damage done as indicated in the photograph on the right—

1. Main shop of nine bays—area 3,000 by 130 ft. One hit, and possibly a second. A large area of the roofing has been stripped and part of the west wall shattered.

2. Long building, area 500 by 40 ft. Roof damaged by blast along the whole length of the building.

3. Five-bay building, area 170 by 110 ft. Heavily damaged at the south-east end.

4. Large shed, area 110 by 50 ft. Heavily damaged, and a nearby shed also appears to be damaged by blast.

5. Seven-bay workshop, area 270 by 130 ft. Direct hit at south-east corner, causing an area of destruction of over 100 square yards.

6. Shed on a siding, area 170 by 25 ft. Roofing almost completely stripped: framework badly damaged.

7. Two sheds, area 310 by 60 ft. Half-demolished.

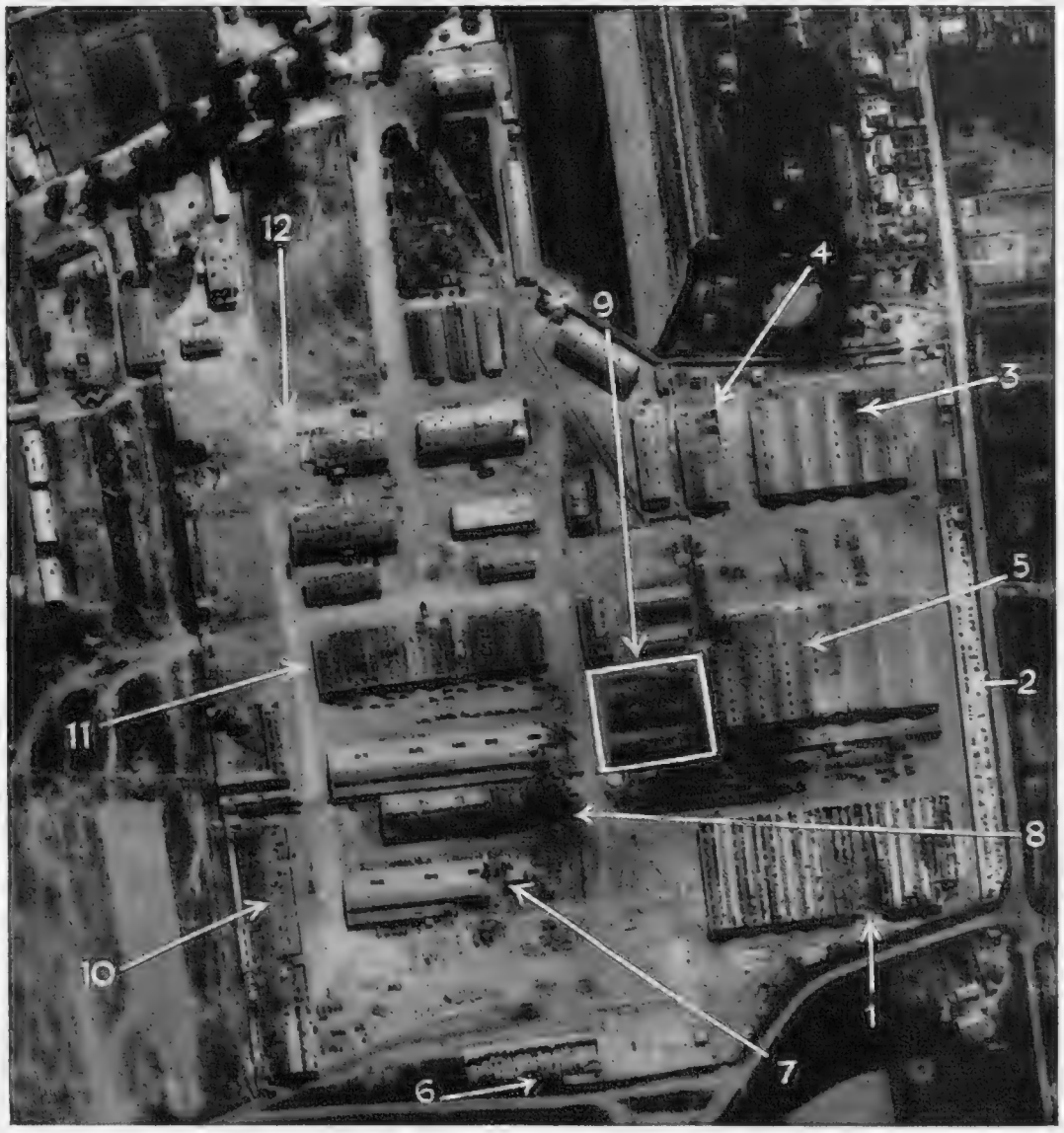
8. Two sheds, area 290 by 50 ft. and 230 by 50 ft. Direct hit at south end causing partial collapse of both buildings and very severe blast damage.

9. Two sheds, area 100 by 25 ft. Almost completely demolished.

10. Long shed, area 310 by 65 ft. Severe roof damage by blast.

11. Large nine-bay workshop, area 270 by 80 ft. Whole roofing stripped, framework shattered and west wall destroyed. Possibly two direct hits.

12. Large shed, area 100 by 50 ft. Severely damaged and partly collapsed.



2. THE GIEN "TANK FARM" AFTER THE ATTACK, showing the very considerable damage wrought by the R.A.F. raiders. For key, see the notes printed on the left

The World of Books—By Vernon Fane

PEOPLE, PLACES AND A POLITICIAN

A Novelist's Novel on Keeping with Phantoms; Beatrice Kean Seymour's "Return Journey"; Village Strife with Winifred Blazey; A Portrait of a Great American

THE late Sir Hugh Walpole was fond of holding up that minor classic, *Maurice Guest*, by Henry Handel Richardson, as an example of a novelist's novel. One might almost say the same thing of Mr. L. A. G. Strong's **THE UNPRACTISED HEART** (Gollancz. 8s. 6d.), although for different reasons.

"Do you believe in love at first sight?" is the question which men have been asked, and women have been asking, ever since questions began to be asked. Mr. Strong writes a postscript to his story, in which he maintains that a novelist who considers his principal character's attitude to life sympathetically, need not necessarily appear to share the same emotional values. He goes on to make it clear that he realises that his hero lacks proportion, and that Christopher Ballantyne's dream experience, which is the novel's technical fulcrum, is really an evasion of the larger issues of life. In other words, people who really do believe in love at first sight can, as he points out, be described as "psychically sensitive people," and can also "use their gifts, not to enrich normal life, but to evade it."

Christopher Ballantyne was a Wykehamist and Civil Servant who had reached middle-age with very little experience other than that acquired in the domestic serenity of a life lived with a doting mother, and in the comparatively innocuous security of his profession. The war came. He began to be overworked; he needed an assistant; his mother had died, and he was alone, except for a devoted secretary, of whose emotional reactions he appeared to be unaware. One day a very nice girl, called Diana, came to apply for the job as his assistant. The interview was quite brief, but he fell in love with her. On her way home from the meeting with him she was knocked down by a taxi and killed, and from then on he builds round her memory an intense, emotional dream existence.

He has a rumbustious friend, a book reviewer called Jeremy Gumption, a vigorous personality, who has built a considerable reputation out of damning and praising fearlessly what he feels like damning and praising. These two characters are very well poised, and it is all within Mr. Strong's pattern that it should be the ubiquitous Gumption who comes to grief, while Christopher is offered redemption from his unprofitable strife in the shape of a pleasantly-naïve but determined girl called Rosamond, whom he saves from drowning and who falls in love with him.

Here is a theme in which Henry James would have delighted, and upon which Virginia Woolf might have built a splendid edifice had she been moved to do so. Mr. Strong tackles it with the competence of a practised novelist who has seen all round it, and has tidied it all up neatly before he begins. Consequently, the killing-off of Diana, and the dramatic entry of Rosamond, carry no more conviction than the competently-melodramatic tricks through which these effects are accomplished.

Yet Mr. Strong is too good a writer not to secure the reader's attention to the flesh-and-blood realities of Messrs. Ballantyne and Gumption. In other words, he brings them alive, and if we are left believing in them rather than in the parts they play in the story, it is, I suspect, because Mr. Strong has had a shot at a novelist's novel.

The first chapter of Mrs. Beatrice Kean Seymour's new novel, **RETURN JOURNEY** (Heinemann. 9s. 6d.), left me in the dazed and rather miserable state of someone who arrives on the third day of a three-day house-party—and in the evening at that. Everybody has already formed a set of apparently close and well-established friendships: there is not a surname to be heard, but a general, if genial, backs-to-the-wall attitude to be observed, and it is physically hard work to dig yourself a place in the general circle of mutual understanding and family jokes.

This, I submit, is not a propitious state for a reader embarking on a 300-page novel. Or a house-party. He must have the determination of a badger and the peculiar aptitudes of a crossword puzzle solver. Having neither, he will indubitably collapse. This is the kind of thing I mean:

"Certainly scenes weren't Claudia's line of country. (Why should there be when there's always Rome to stage them for her? Sarah would say.). . . . Mark was not above putting ideas into the heads of silly young women . . . but he wanted to go to bed with none of them. Not that Rome so expressed it, though since Rome's surprising marriage to Miles Faringdon he'd found it necessary to adjust his views of what this youngest sister of his would say or do. Nothing more surprising, indeed, than the way she'd suddenly developed an affection for Celia d'Estin she'd certainly never had for Celia Herriard, unless it was the sort of affection Celia evinced of late for Rome Faringdon she'd never evinced for Rome Herriard."

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Mrs. Kean Seymour's story develops, for the diligent reader, a certain interest because, as always with this writer, the plot is neatly and convincingly dovetailed, and the characters, when they are disentangled, behaved very, very like human beings.

It would be a waste of space to say that this was not Mrs. Kean Seymour at her best; it is Mrs. Kean Seymour at her least readable, and that is a great pity.

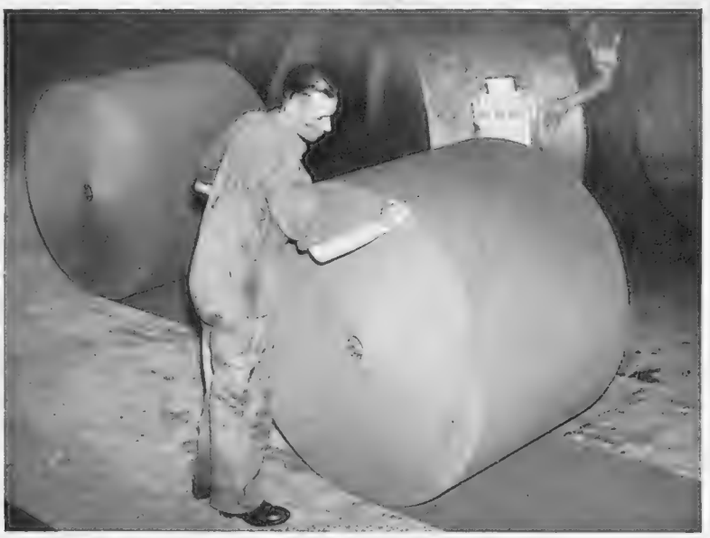
GRACE BEFORE MEAT (Michael Joseph. 8s. 6d.) seemed to me a very satisfactory book for a number of reasons, not the least of which is a good, tough murder about half-way through. And if that makes it sound like a pre-war station sandwich, I'm sorry. But a far sounder reason for enjoying it was Miss Winifred Blazey's admirably-detached and cynically-observant view of the spite and the malice and the pettiness with which the most idyllic of country villages always seem to be riddled.

Candleford Hainault was all that its name suggests or that the 1912 period can do to help: a beautiful, remote village with water-splashes and climbing roses and village idiots in abundance. What makes it remarkable, beyond these rather ordinary adjuncts, is the fact that it is described by someone who knows enough about village life not to satirise it with too great emphasis. Miss Blazey knows about the writers of anonymous letters, but she also knows about reed-cutting and harvest-time and small-holdings. In other words, she knows about country life as well as country characters, and the combination is something that I recommend to you.

Miss Barbara Grace—the title is rather a bad pun—is a lovely and very young schoolteacher, with a dangerous habit of speaking her mind. This determined trait lands her into all sorts of complications beyond the ones we must all expect when we attempt to lead the simple life. She is slandered, threatened, proposed to in a diversity of manners, suspected, flattered, loved and reviled. She is, in fact, quite a girl, and I wouldn't at all mind meeting her again, though preferably in Miss Blazey's agreeable fiction. That certitude of right and wrong might be a little rarefied for everyday usage.

When Miss Grace comes to the village to pursue her most suitable vocation, the village knows a great deal more about her at the end of twenty-four hours than she knows about the village. That is generally the way of it, and a more invertebrate character would have suffered the situation without comment, but not our crusading Miss Grace, who reorganises the school, evicts some loafers from her own little house, speaks sharply to the superintendent and gives the vicar—who deserves it, of course—a rather acid piece of her mind.

That she gets into no serious trouble, but marries the son of the local baronet, is, some might say, the reward of integrity; others, the fruition of a crisply-defined plan. Whichever way it goes, this is an extremely entertaining book, and a "must" for your list.



OLD RAGS INTO NEW ROOFS—*Above*, the rags are pulped; *below*, a finished roll of grey felt base made from the pulp: These two pictures come from a factory in the south of England where 250 tons of vital war materials are made each week out of rags. A great endless belt feeds the bits and pieces from rag-bags and work-boxes of countless homes into a vast cutting-machine which tears them to shreds at the rate of two tons an hour. This machine swallows up belts from cotton frocks, bags, floor-cloths, old dusters, worn scarves, bits of curtains, shawls, scraps of darning-wool, frayed collars and lumps of old carpet. From the cutting-machines, the shredded rags drop down a chute into a beater, which turns them into pulp at the rate of 500 lb. an hour. After going through other processes, including pressing and drying, the mixture becomes bituminised felt. This is the first-quality roofing felt for Army huts, dock and harbour installations and war factories. It has been used for repairing the "blitzed" houses of London, and thousands of tons will be wanted for the Second Front. To-day the machines are getting less than half their proper quota of rags, and the Salvage and Recovery Board are appealing to the British housewife, dressmaker, tailor—anybody who has a scrap of rag to spare—to keep a rag-bag for the salvage collector

Every English school-boy knows the log-cabin-to-White House story. It will please us all to learn, therefore, from **CORDELL HULL: A BIOGRAPHY**, by Harold B. Hinton (Hurst and Blackett. 12s. 6d.), that Mr. Roosevelt's Secretary of State was, in fact, born in a log cabin in the Cumberland Mountains nearly seventy-two years ago.

Mr. Cordell Hull's career is almost a classic instance of the opportunities open to any American citizen, no matter how humbly born. It should be remembered, too, that Mr. Hull was not born in the most progressive State in the Union, and that, although he made his first public speech at the age of sixteen, and was admitted to the Tennessee Bar five years later, the White House was still a long way off.

Like the famous Theodore Roosevelt, he raised a company of volunteers and fought in the Spanish War, and it was then that he became interested in affairs outside the United States. He entered Congress in 1907, and became associated with the movement to institute a Federal Income Tax. His grasp of economic and financial questions singled him out as a developing statesman, and it was not long after his election to the Senate that President Roosevelt nominated him Secretary of State.

From then on, Mr. Cordell Hull applied himself to the complex problems confronting the Administration in the field of foreign affairs. In this he was hampered by some vigorous, but parochial, figures on the Senate's Foreign Relations Committee, but it is greatly to his credit that, during the difficult period of his country's neutrality, he steered its foreign policy in such a manner as to earn the respect of all the Allied nations. Recent developments in South America will have more than justified the patience and diplomatic skill with which he built up and guided his famous "Good Neighbours" policy.

Colonel Hinton writes this story as a personal friend, but he is a good-enough journalist to present it skilfully to readers, who will also be grateful for the background of American politics which he provides.

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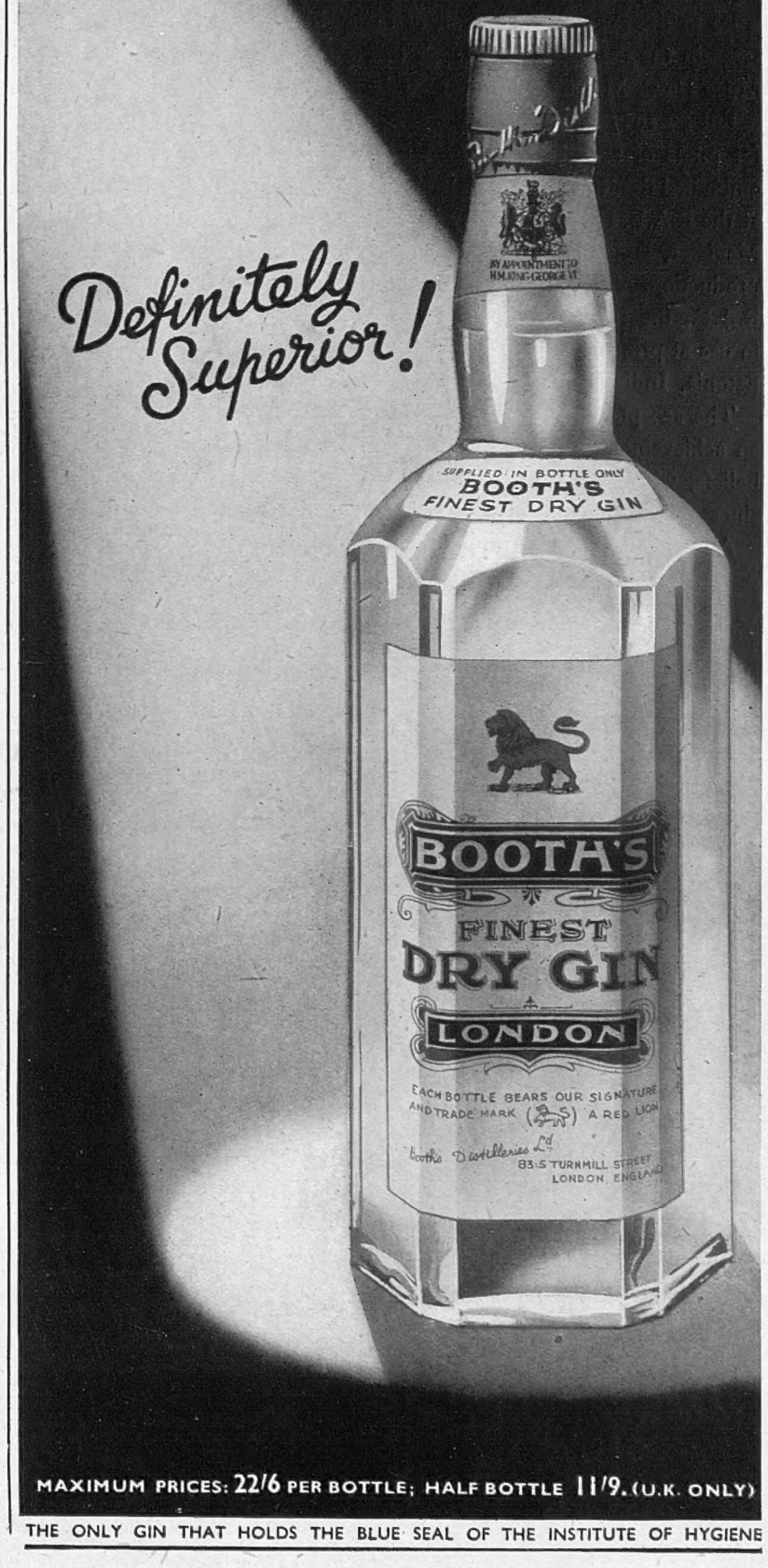

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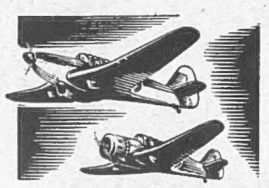
AS far back as 1935 the designers of Miles light monoplanes had foreseen the need of the R.A.F. for low-wing monoplane trainers to provide training on aeroplanes with similar characteristics to the operational aircraft of monoplane design. The first stage in the development of their theory was the adaptation of a Miles Hawk Major as a primary trainer.

But by 1937 their plans were complete for an advanced trainer for pilots of aeroplanes in the Hurricane and Spitfire class. It embodied the Rolls-Royce Kestrel engine of 745 h.p. and appeared at the R.A.F. Hendon Display in that year. In the meantime the Magister, a natural development of the Hawk Trainer, was in production. This monoplane trainer was again accepted by the R.A.F., the Irish, New Zealand and Turkish Air Forces. It is in use at primary training schools in South Africa, Egypt, Latvia, Estonia, India, Australia, etc.

The acceptance of Miles Training Aircraft by the R.A.F. was an achievement that amply justified the designers' faith in their beliefs, when it is realised that the British Government's policy since 1922 was against wooden aircraft of any type.

All Miles Aircraft to date are of all-wood construction, even the now-famous Miles Master-fast advanced Monoplane Trainer for the Monoplane Pilots of the R.A.F.



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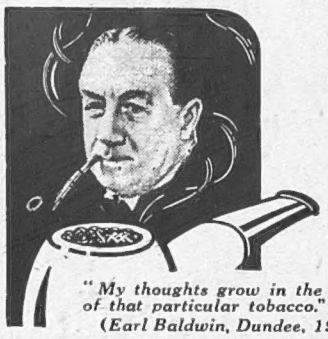

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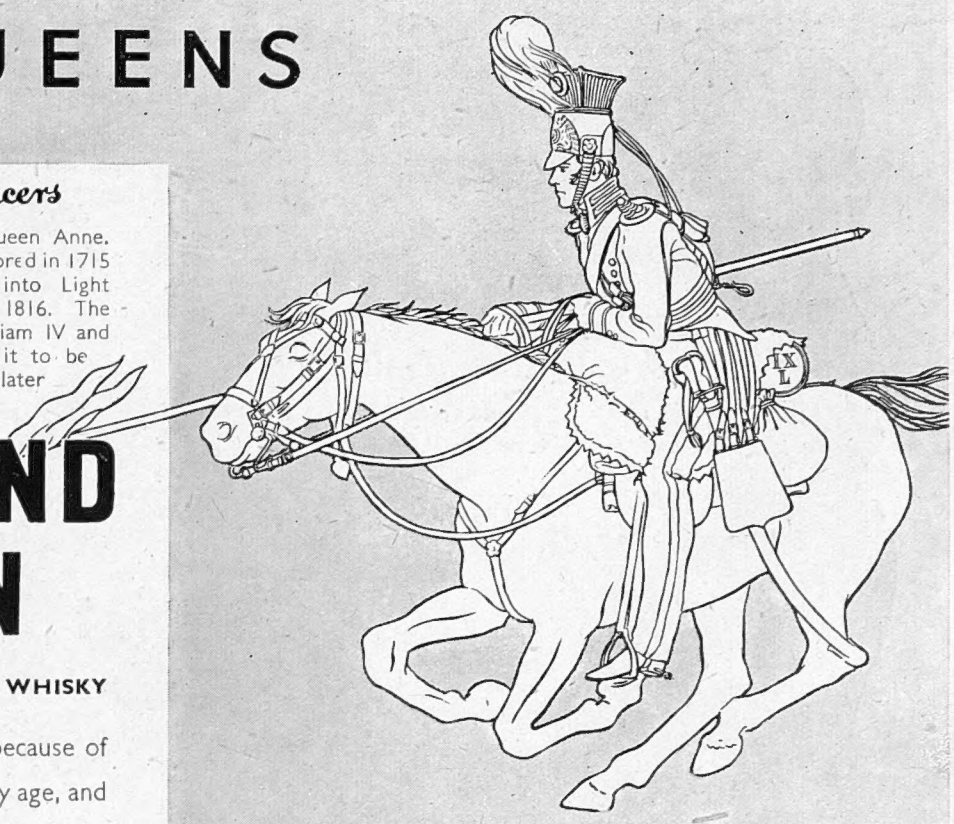

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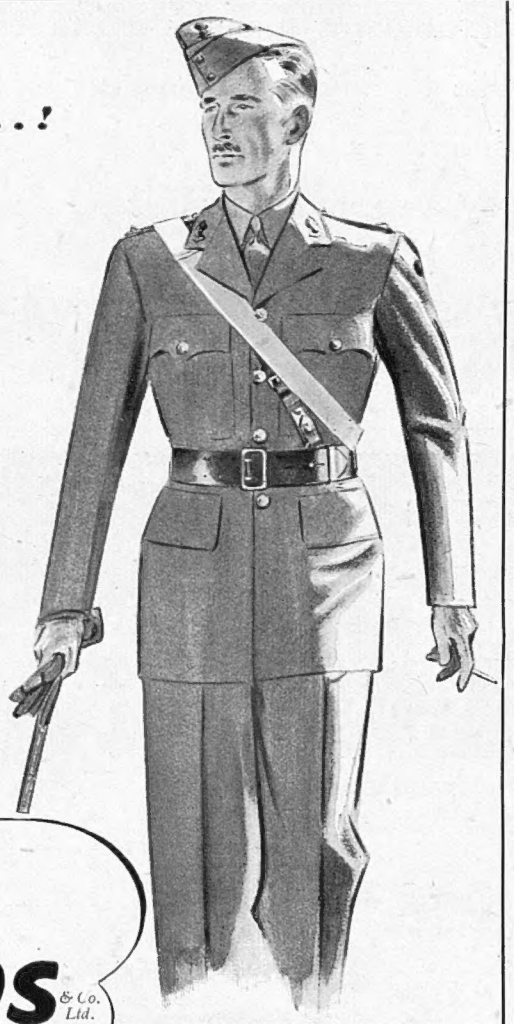

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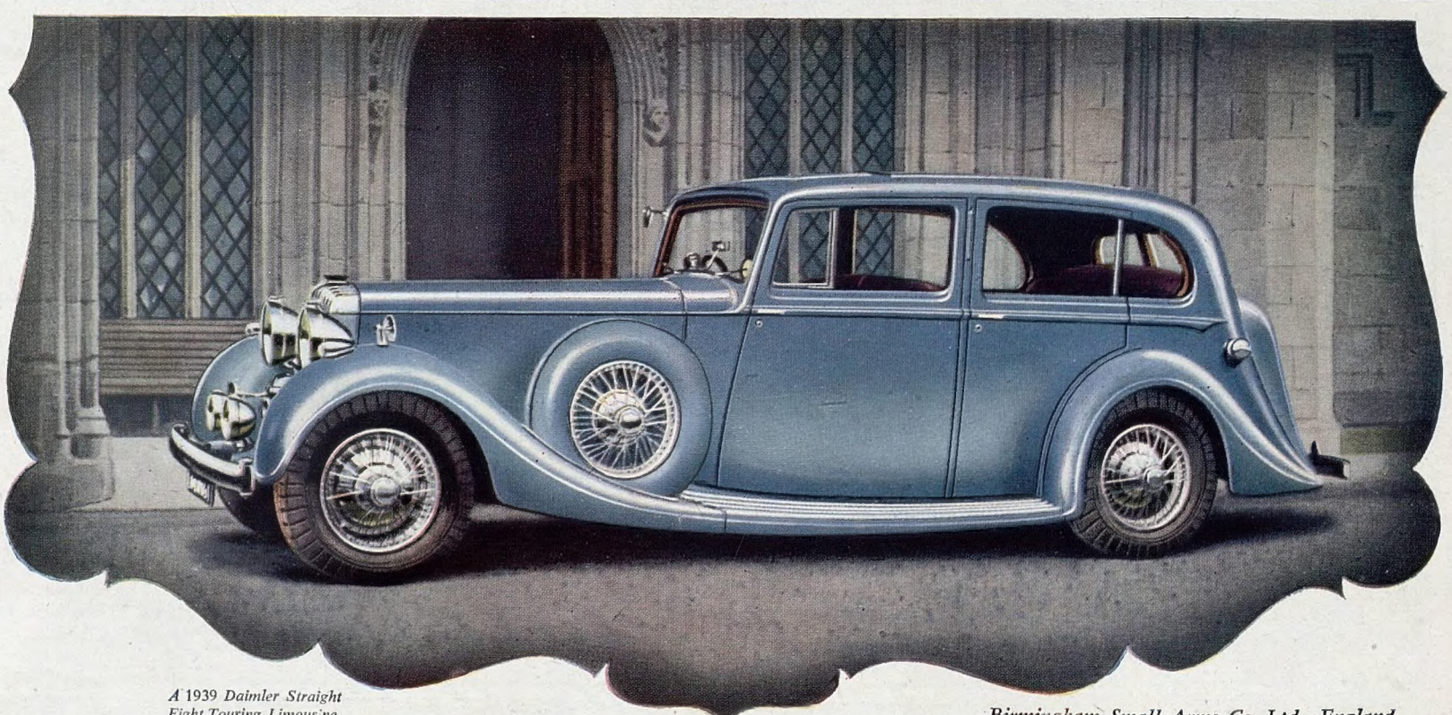

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